

# Technology Review

Edited at the Massachusetts Institute of Technology

June 1966



## The Urban Challenge

# technology review

Published by MIT

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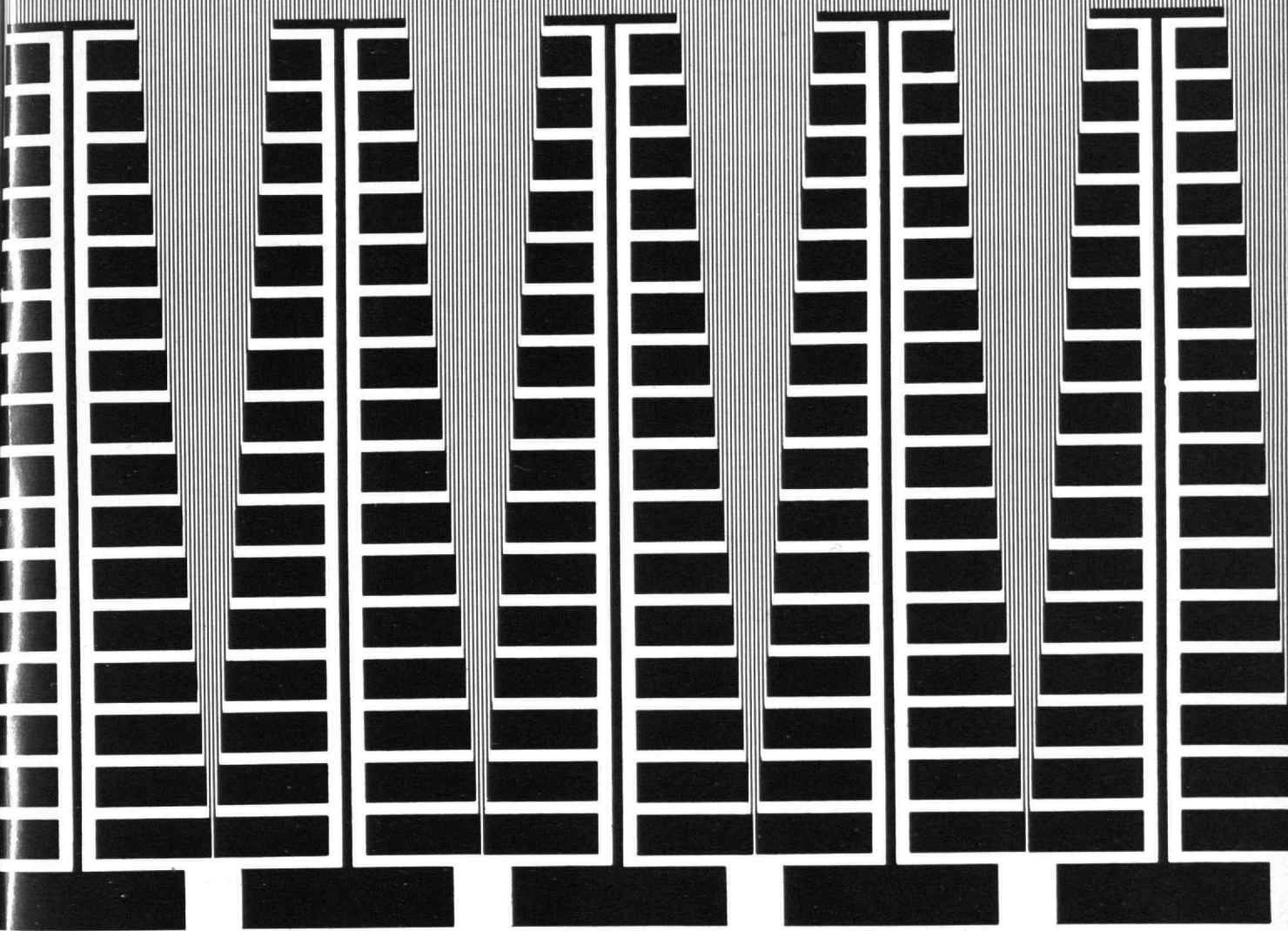
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Cambridge, Mass. 02139

Telephone: Area Code 617, University 4-6900, Extension 4871.

An annual subscription to Technology Review is \$4 in the U.S., \$4.50 in Canada and elsewhere, and a single copy, 60 cents. Three weeks must be allowed to effect a change of address, for which both the old and the new address of the subscriber should be given.

The office of publication is 10 Ferry St., Concord, N.H., 03301, where The Review is printed by The Rumford Press. Second-class postage is paid at Concord, N.H.

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## Bisplinghoff Appointed

Professor Raymond L. Bisplinghoff will become head of the M.I.T. Department of Aeronautics and Astronautics on July 1. He will succeed Professor C. Stark Draper, '26, who recently was appointed Institute Professor. Dr. Draper will continue as a senior member of the Faculty of the Department and as Director of the Instrumentation Laboratory, which he founded more than a quarter of a century ago.

Professor Bisplinghoff, Deputy Head of the Department since 1957, will be returning to M.I.T. from a leave of absence which he began in the summer of 1962 to serve first as Associate Administrator for Advanced Research and Technology of the National Aeronautics and Space Administration and later as Special Assistant to the NASA administrator.

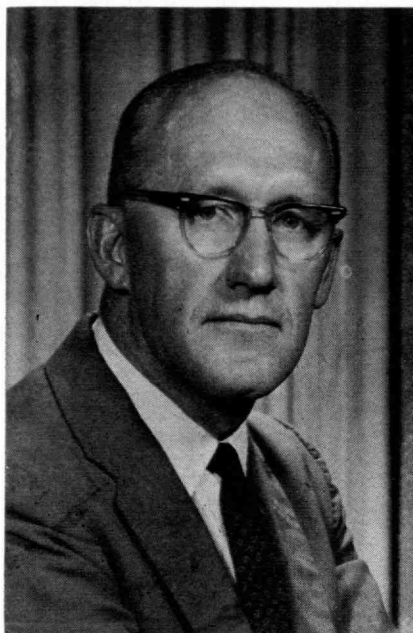
Dean Gordon S. Brown, '31, of the M.I.T. School of Engineering, paid tribute to Professor Draper's leadership of the Department during a critical 16-year period in which space sciences and engineering emerged as a major field of technical activity.

The teaching of aeronautical engineering was started at M.I.T. in 1913 by the now Professor Emeritus Jerome C. Hunsaker, '12. The Department that grew out of his pioneer teaching was the first aeronautical engineering department in an American university.

Professor Draper, who had been deputy head of the Department for several years, took over the chairmanship when Dr. Hunsaker relinquished those responsibilities in 1951.

During Professor Draper's 35 years in the Department, work on instrumentation for aircraft and space vehicles has grown into a sequence of undergraduate courses and graduate study programs.

As a scientist and engineer, Professor Draper has earned international recognition for his original work on the theory and development of instrument engineering, with special attention to aircraft engine indi-



PROFESSOR BISPLINGHOFF

cators and controls, gunsights, inertial guidance systems, navigation and control for high-performance aircraft, naval vessels, missiles, satellites, and spacecraft.

Dr. Draper founded the Instrumentation Laboratory just before World War II and has directed it continuously ever since. From it have come the guidance systems and components for the Thor, Titan and Polaris missiles and the guidance system for the Project Apollo spacecraft that will carry three U.S. astronauts to the moon and back.

In February, 1965, President Johnson added to Professor Draper's many awards and citations by presenting him with a National Medal of Science for "innumerable imaginative engineering achievements." He was earlier awarded the Medal for Merit by President Truman.

Before coming to M.I.T. in 1946, Professor Bisplinghoff had worked for the aircraft industry as well as the Army Air Corps and the Navy Bureau of Aeronautics. Prior to World War II, he was concerned with the development of light aircraft and later, as a naval officer, took part in the research and development of high-speed military aircraft.

## New Professorship

A new chair, the Carbon P. Dubbs Professorship in Chemical Engineering, has been established at M.I.T. A \$500,000 endowment for the chair in honor of the late Carbon P. and Bertha E. Dubbs has been provided by their three children: Carbon C. Dubbs, '35; Mrs. Jean Dubbs McAdams, wife of William H. McAdams, '17, M.I.T. Professor Emeritus of Chemical Engineering; and Mrs. Bertha Dubbs Cardinal.

"The generous gifts from members of the family are particularly appropriate since the endowment will make possible teaching and research in a field in which Mr. Dubbs was a remarkable innovator," said James R. Killian, Jr., Chairman of the M.I.T. Corporation.

Mr. Dubbs, a pioneer in the petroleum refining industry, was a native of Pennsylvania. He studied at the University of Pennsylvania and Philadelphia College of Pharmacy. After he had finished college he went to work in the asphalt plant of his father, Jesse A. Dubbs, in California.

In the early 1900's, Jesse A. Dubbs perfected a commercial process for removing water from emulsified oil, that also produced a small yield of cracked gasoline. This process and the patent covering it was the foundation of Universal Oil Products Company. Carbon P. Dubbs became associated with Universal in 1915 and during his affiliation with the company he perfected many revolutionary inventions relating to the production of gasoline and other valuable products from hydrocarbon oil. In his capacity as vice-president of Universal, Mr. Dubbs supervised the design and construction of plants for commercially utilizing these inventions, on which several hundred patents were obtained.

One of the important contributions of Carbon P. Dubbs was the development of the Clean Circulation Process which made a giant step forward in the commercial production of cracked gasoline by permitting continuous operation for the first time on a commercial scale.

(Continued on page 6)

# Statements from the U. S. Senate Vietnam Debate, 1966?

"Victory is possible, certain, and almost immediate if, right away . . .

Vietnamese officials will resolutely launch into the necessary political and social reforms and correct their mistakes."

—Deputy René Kuehn. *Journal Officiel*: October 27, 1953\*

To speak of negotiations "is the surest means of raising the morale of the adversary and of demoralizing our own troops."

—Deputy Raymond Dronne. *Journal Officiel*: October 23, 1953.\*

"I think that [withdrawal] . . . would be more criminal than the war itself . . . the Vietnamese soldiers . . . would be exposed to a massacre . . .

These people have placed confidence in us.

.We want to return their freedom to them."

—Deputy André Denis. *Journal Officiel*: January 28, 1950.\*

## No!

"You have gotten yourself into an adventure and you don't know how to get out."

—Deputy Robert Chambeiron. *Journal Officiel*:

January 27, 1950.\*

"I have shared the existence of those fighters. . . .

Often they have questions over the national interest of their sacrifice, and I am thinking today of the harm we may be doing to their morale.

May they know, those glorious fighting troops . . .

the entire nation salutes with emotion their courage and sacrifices!"

—Deputy Henri Laforest. *Journal Officiel*: October 23, 1953.\*

## French arguments made before

"We must choose . . . outside of the military solution, outside of the

solution of force, there is but one possibility: negotiation. . . .

Have we the means to avoid this outcome after having made it

inevitable by our errors and mistakes?"

—Pierre Mendès-France to the Chamber of Deputies, November 22, 1950.\*

## the fall of Dien Bien Phu

\*These quotations from the pages of **LOST SOLDIERS** highlight the political context in which the French military establishment was ordered to fight and win. Doggedly engaged in wars in which it had neither the allies nor the active sympathy of much of its own population; furnished neither the means, nor the desperately needed political direction; thwarted in its mission, confused and misunderstood, the Army moved dangerously toward direct conflict with its legitimate master, the civil government.

**"Some day the  
...Army will demand  
a reckoning for the  
blood it has  
shed."**

—Deputy Alain Savary.

*Journal Officiel*: October 23, 1953.

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— Joseph Kraft, columnist and author.

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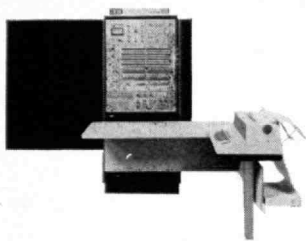
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## INDIVIDUALS NOTEWORTHY

(Continued from page 4)

### New Sloan Fellows

Forty-five young business and government executives in the United States and abroad have received Alfred P. Sloan Fellowships at M.I.T. for 1966-1967. The Fellows were selected by M.I.T. from a group of executives nominated by their organizations for admission to the program. One of the Fellowships went to a young executive from South America as part of a program to help develop managerial resources in that continent.

The Sloan Fellows will move with their families to the Cambridge area in June, to spend 12 months at M.I.T. studying the fundamentals of management and changes in management and technology. Many will complete M.I.T.'s requirements for the degree of master of science in management.

"The men designated as next year's Sloan Fellows are not only among the most promising of our country's young executives," said Peter P. Gil, Director of Executive Development Programs, "they reflect the increasing interest on the part of industry and government in this country and abroad to provide management resources for the future."

The program at M.I.T. is made possible by grants from the Alfred P. Sloan Foundation, Inc. The 1966-1967 Sloan Fellows are:

*Fitzhugh B. Allderdice*, 3d, Lockheed-California Co.; *John W. Anderson*, Sylvania Electric Products, Inc.; *Jose I. Avellaneda*, University of the Andes; *Eugene N. Babb*, '51, Hughes Aircraft Co.; *Assa Barak*, Mekoroth Water Co., Ltd.; *Robert E. Beck*, American Tel. and Tel. Co.; *Charles W. Bostick, Jr.*, '50, National Security Agency, Dept. of Defense; *Robert F. Calman*, Mobil Oil Co.; *Lionel M. Chicoine*, Ford Motor Co.; *Robert P. Clagett*, Western Electric Co.; *Gordon S. Cochrane*, Sun Oil Co.; *Jacques E. Daccord*, Urwick, Currie Ltd.; *Robert E. Darling*, U.S. Air Force; *George E. Dausman*, '53, U.S. Air Force; *William A. Davis, Jr.*, U.S. Army; *Max Goldman*, Radio Corp. of America;

*S. Paul Hagan*, Hagan Ice Cream Co.; *Burrell W. Hays*, U.S. Navy; *Wallace B. Hunter*, U.S. Steel Corp.; *Robert M. Ilfeld*, '44, Quick Plastics Co.;

*James E. Landers*, Continental Oil Co.; *David A. Lewis*, Canadian Imperial Bank of Commerce; *Henry R. Lewis*, '54, Radio Corp. of America; *Arland L. Mackinney*, The Babcock and Wilcox Co.; *Louis Maertens de Noordhout*, Campbell Soup Co.; *John T. Maske*, International Business Machines Corp.; *C. Victor Meyer*, Friden, Inc.; *Earl J. Miller*, American Electric Power Service Corp.; *Homer J. Morgan*, National Aeronautics and Space Administration; *John R. O'Brien*, Chrysler Corp.;

*Robert M. Pedraglia*, Douglas Aircraft Co.; Inc.; *Peter L. Peterson*, The Boeing Co.; *William A. Porter*, Dalmo Victor Co.; *John Radomsky*, Caterpillar Tractor Co.; *Baruch Rosenberg*, Wolf Research and Development Corp.; *Gerald S. Rosenfelder*, Bell Aerosystems Co.; *Arthur E. Schiller, Jr.*, The Bell Telephone Co. of Pa.; *Gene J. Shnell*, Southwestern Bell Telephone Co.; *Joseph W. Shuster*, Kennecott Copper Corp.; *Peter D. Smith*, Eastman Kodak Co.; *Robert E. Smylie*, National Aeronautics and Space Administration; *W. John Swartz*, The Atchison, Topeka and Santa Fe Railway Co.;

*John R. Thomas*, International Business Machines Corp.; *Joel D. Ware*, Southern Bell Tel. and Tel. Co.; *Donald C. Watters*, Dow Corning Corp.

### O. Henry Award

A short story by Tom Cole, lecturer in the humanities at M.I.T., has won third place in the 1966 O. Henry Awards. The story, "On the Edge of Arcadia," has been published by Doubleday in the 46th annual O. Henry Awards anthology of short stories selected from national magazines and literary reviews. First place went to John Updike.

Mr. Cole received his A.B. from Harvard in 1954 and his A.M. there in 1958. His first published story won an Atlantic First award and appeared in the 1962 O. Henry collection. Atlantic-Little, Brown published his first book, *An End to Chivalry*, in 1965.

(Continued on page 8)

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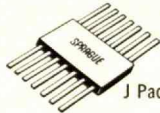


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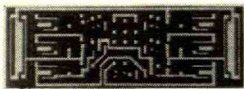
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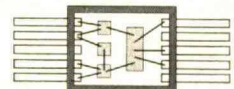
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(Continued from page 6)

## Provost Honored

Dickinson College gave its 1966 Joseph Priestley Award to Provost Charles H. Townes in March, honoring him for his "contributions to the welfare of mankind through physics." The award referred specifically to his role in the invention of the maser and the laser.

Dr. Townes, introduced by U. A. Whitaker, '23, member of the M.I.T. Corporation, as a scientist with an "intense interest" in the education of young scientists, spoke on, "Lasers—A Research Case History." He advocated support of basic research in colleges and universities "out of simple curiosity" and said that the key to the development of the laser was "some unlikely sounding basic university research." The laser, Dr. Townes said, "creates a new technology which can be described roughly as a marriage of optics and electronics, with the wide range of applications characteristic of these fields."

"Lasers are big business," Dr. Townes said, foreseeing many uses for them as an important tool in basic science and communication research, in industry, and in medicine.

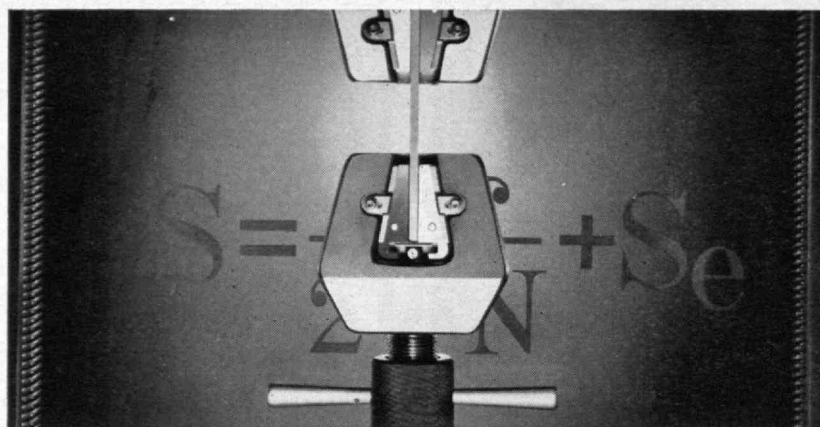
The Priestley Award, established by Dickinson College in 1952 to honor the discoverer of oxygen, was given to another M.I.T. scientist and administrator, Karl Taylor Compton, in 1954. In 1962 the award went to Robert B. Woodward, '36, who won the 1965 Nobel prize in chemistry.

## Chemistry Award

James C. Wei, '54, senior research associate in Socony Mobil Oil Company's Princeton, N.J., laboratory, received the \$5000 Petroleum Chemistry award of the American Chemical Society. The presentation was made in March by the sponsor of the award, Precision Scientific Company, at the society's 151st national meeting in Pittsburgh.

Dr. Wei was honored for his work in the application of mathematics, chemistry, and engineering in solving basic chemical reaction systems.

(Continued on page 11)



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(Continued from page 8)

## Honors to Alumni

Recipients of recent awards and similar distinctions have included:

*George J. Easter, '15*, the Greaves-Walker Award by the National Institute of Ceramic Engineers . . . *Edward McL. Tittmann, '29*, the Rand Memorial Gold Medal by the American Institute of Mining, Metallurgical, and Petroleum Engineers . . . *Samuel Wall, '33*, the "North-east Division Engineer of the Year" award by the Department of the Navy;

*James F. O'Connor, '43*, the Bronze Medal by the U.S. Department of Commerce . . . *Robert W. Sittler, '51*, the M. Barry Carlton Award from the IEEE Aerospace and Electronic Systems Group . . . *Hugh E. Witt, '57*, the Air Force Association's Citation of Honor by the U.S. Air Force.

## William Campbell: 1892-1966

William L. Campbell, '15, former Head of the M.I.T. Department of Food Technology, died February 13 in Bennington, Vt., at the age of 73. Professor Campbell, Head of the Department from 1945 to 1950, was an authority on food manufacturing, with wide experience in industry and administration.

Born in Cincinnati, Professor Campbell was a 1913 graduate of Yale; he studied civil engineering at M.I.T. and received a law degree from Boston College.

During his years here, Professor Campbell was executive director of the Committee on Financing Development, which between 1948 and 1951 acquired \$25 million for the Institute.

He is survived by his wife, Helene, and three sons.

## Architectural Juror

Dean Lawrence B. Anderson, '30, of the M.I.T. School of Architecture and Planning, is one of five members of the Jury of Awards in the 1966 Architectural Awards of Excellence Program sponsored by the American Institute of Steel Construction.

(Continued on page 12)



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## INDIVIDUALS NOTEWORTHY (Continued from page 11)

### New Posts

Named in the news of promotions, elections, and appointments were:

*Saul M. Silverstein*, '21, and *Norman L. Greenman*, '44, respectively, as Chairman of the Board and as President and Chief Executive Officer, Rogers Corporation . . . *Philip M. Richardson*, '26, as a Member, the Massachusetts Governor's Advisory Committee on Science and Technology . . . *John A. Swift*, '27, as Vice-president, Crown-Bellis Corporation;

*John T. R. Nickerson*, '32, as Visiting Professor of Food Science, University of Illinois . . . *Gilbert W. King*, '33, as Associate General Manager—Laboratory Operations, Aerospace Corporation . . . *J. B. Schliemann*, '36, as Vice-president, Allied Research Associates, Inc.;

*Samuel P. Felix, Jr.*, '39, as Vice-president, De Laval Turbine, Inc. . . . *Seymour E. Heymann*, '39, as Vice-president, Signode Corporation . . . *Chester A. Williams, Jr.*, '39, as Assistant Vice-president and as Chief Patent and Trademark Counsel, The Singer Company;

*Russell DeYoung*, '40, as a Director, the Kennecott Copper Corpora-

tion . . . *John M. Biggs*, '41, as President, Boston Society of Civil Engineers . . . *Raymond A. Charles*, '43, as a Trustee, Knox College;

*Gay V. Land*, '44, as Vice-president—Corporate Planning and Development, Southern Natural Gas Company . . . *Harold Thorkilsen*, '45, as President, American Safety Razor Company . . . *Ralph W. Rawson*, '46, as a Director, the Elox Corporation;

*Ezra S. Krendel*, '47, as Professor of Operations Research and Statistics, University of Pennsylvania . . . *Richard S. White*, '48, as Vice-chairman, Industry Advisory Committee on Automation . . . *Horace A. Sawyer, Jr.*, '49, as President, Climax Molybdenum Company and as Vice-president, AMAX (American Metal Climax, Inc.);

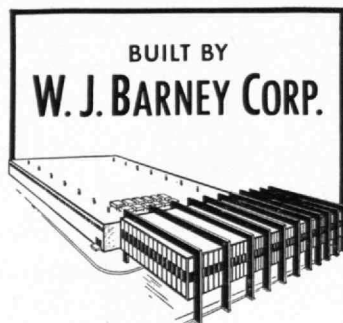
*Edward J. Hayes*, '50, as Vice-president, Kelsey-Hayes Company . . . *Anthony D. Kurtz*, '51, as President, Kulite Semiconductor Products, Inc. . . . *Colonel Harold C. Teubner*, '51, as a nominee for Brigadier General, U.S. Air Force;

*David J. McGrath*, '59, as a Member, Young Presidents' Organization . . . *Ralph R. Rumer, Jr.*, '62, as Acting Head, Civil Engineering Department, State University of New York at Buffalo . . . *Arnold H. Singal*, '63, as Vice-president—Research, Planning, and Development, Federal Distillers, Inc.

### Athlete Wins Award

W. Sumner Brown, '66, of Pittsburgh, is the winner of the Clifford Award, presented by the M.I.T. Class of 1948 to the outstanding M.I.T. athlete of the year. Brown, an electrical engineering major, is considered the finest distance runner in M.I.T.'s history and has broken practically every Institute record.

(Continued on page 14)



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**I**NDIVIDUALS NOTEWORTHY  
(Continued from page 12)

### Hervey Shimer: 1872-1965

Hervey Woodburn Shimer, M.I.T. Professor Emeritus of Paleontology, died December 13 in Weymouth, Mass., at the age of 93.

Dr. Shimer was a noted educator and author and his 1944 book, *Index Fossils of North America*, co-authored with Robert R. Shrock, then Associate Professor of Geology at M.I.T., was a definitive work in the field.

After receiving his M.A. from Lafayette College in 1901, Dr. Shimer went to Columbia for his Ph.D. He joined M.I.T. as an instructor in 1903 and taught for 39 years, retiring in 1942 as Professor of Paleontology.

His son, John A. Shimer, '39, is also a prominent geologist.

### Four IEEE Fellows

The Institute of Electrical and Electronics Engineers presented 1966 Fellow Awards to four Boston area M.I.T. Alumni this spring. The Fellows, who are IEEE senior members of unusual professional distinction, are elected once a year by the IEEE Board of Directors.

The four Fellows are *Daniel R. von Recklinghausen*, '51, chief research engineer, H. H. Scott, Inc.; *William M. Hall*, '28, consulting scientist at Raytheon; *Walter E. Morrow, Jr.*, '49, Associate Head of M.I.T. Lincoln Laboratory Communications Division; and *Ronald E. Scott*, '50, Dean of Engineering at Northeastern University.

### Physicist Honored

Murray Gell-Mann, '51, Professor of Physics at the California Institute of Technology, is one of five U.S. scientists named to receive the Ernest Orlando Lawrence Memorial Award for 1966. The award is made by the Atomic Energy Commission with the approval of President Johnson.

### Receives Patent

*George G. Lampke*, '54, a Raytheon Company engineer, has been granted a patent on his invention of an improved voltage regulator for use with power supplies.

(Continued on page 68)



Report from

**BELL  
LABORATORIES**

## New type of microscopy reveals internal structures of crystals

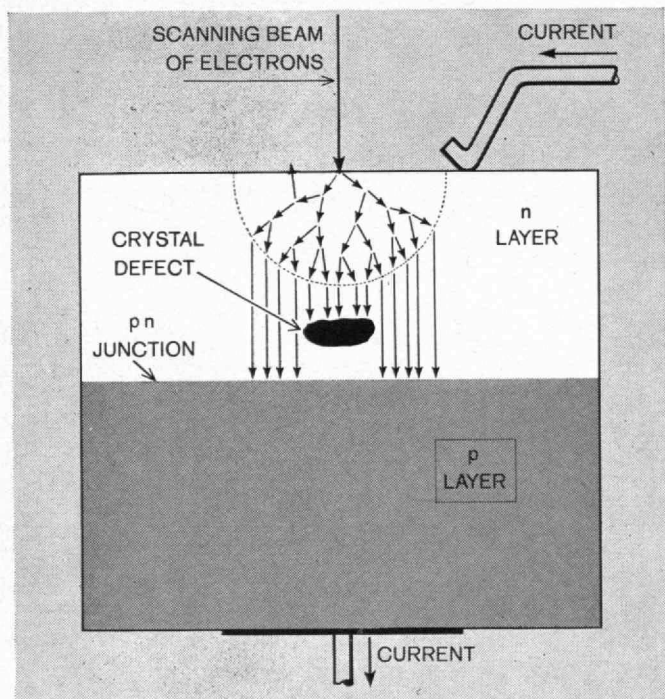
Bell Telephone Laboratories scientists have developed a new type of microscopy that uses a beam of electrons as a probe to investigate the structures of semiconductor crystals. Unlike other electron-probe arrangements or the electron microscope, which are limited to studies of surfaces or very thin

layers, the new system is used to reveal features within the body of the semiconductor.

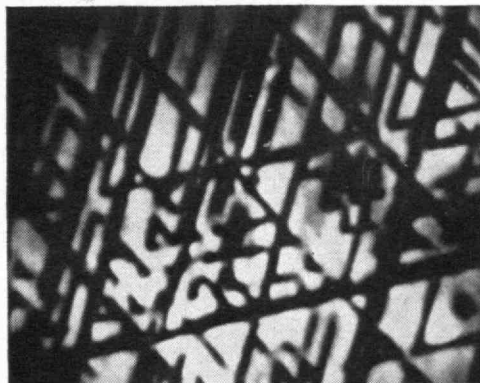
As shown in the drawing below, crystal defects are not probed directly by the electron beam. Instead, the secondary charge carriers created by the beam are used, in effect, to project an

image of each imperfection onto the plane of a pn junction. This image is then reproduced on a cathode-ray tube. The process is nondestructive of the crystal, usually does not require special treatment of the crystal surfaces, and has a resolving power higher than that of optical microscopes.

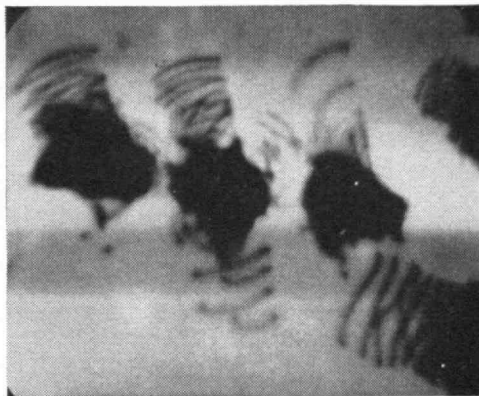
This new type of microscopy reveals both surface and internal structure and allows separate identification of each. It has proved useful in studying crystal defects that may degrade the performance of semiconductor diodes and is also leading to greater understanding of crystalline structures.



**Mechanism of new type of microscopy developed at Bell Telephone Laboratories:** Beam of electrons is directed onto surface of semiconductor crystal containing pn junction and penetrates crystal a short distance (vertical distance here is exaggerated). Beam creates a "cloud" of secondary electron-hole pairs, indicated by the semicircle of dots. Normally the created charge carriers are collected by the pn junction, giving rise to diode current. If the beam is swept across a crystal defect, however, the diode current drops, apparently because the tendency for electrons and holes to recombine is heightened in the vicinity of the defect. Thus the defect casts a "shadow" on the pn junction. The surface of the crystal is scanned by the electron beam in a series of lines, TV-fashion. The varying diode current, displayed on the face of a cathode-ray tube, results in "pictures" of the defects in the vicinity of a junction. In such pictures (right) the crystal defects appear as dark lines or regions.



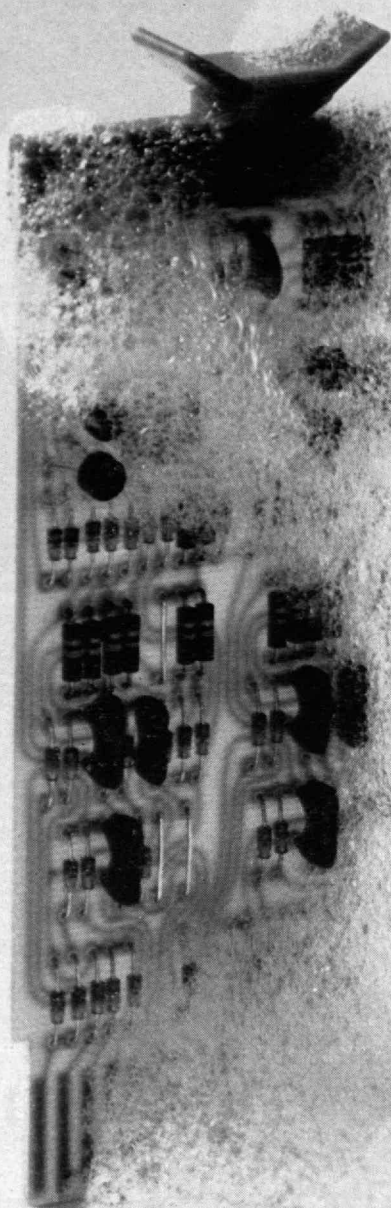
Photomicrograph produced on face of cathode-ray tube by new technique. Dark lines show regions of crystal imperfections resulting from strain introduced by diffusing phosphorus into surface of silicon. (620X magnification.)



Large dark areas are regions of crystal damage caused by mechanical indentations in surface of silicon. Heat treatment relieved strain and caused edge dislocations, seen here as radiating lines or arc segments, to move outward from strained region. (800X magnification.)



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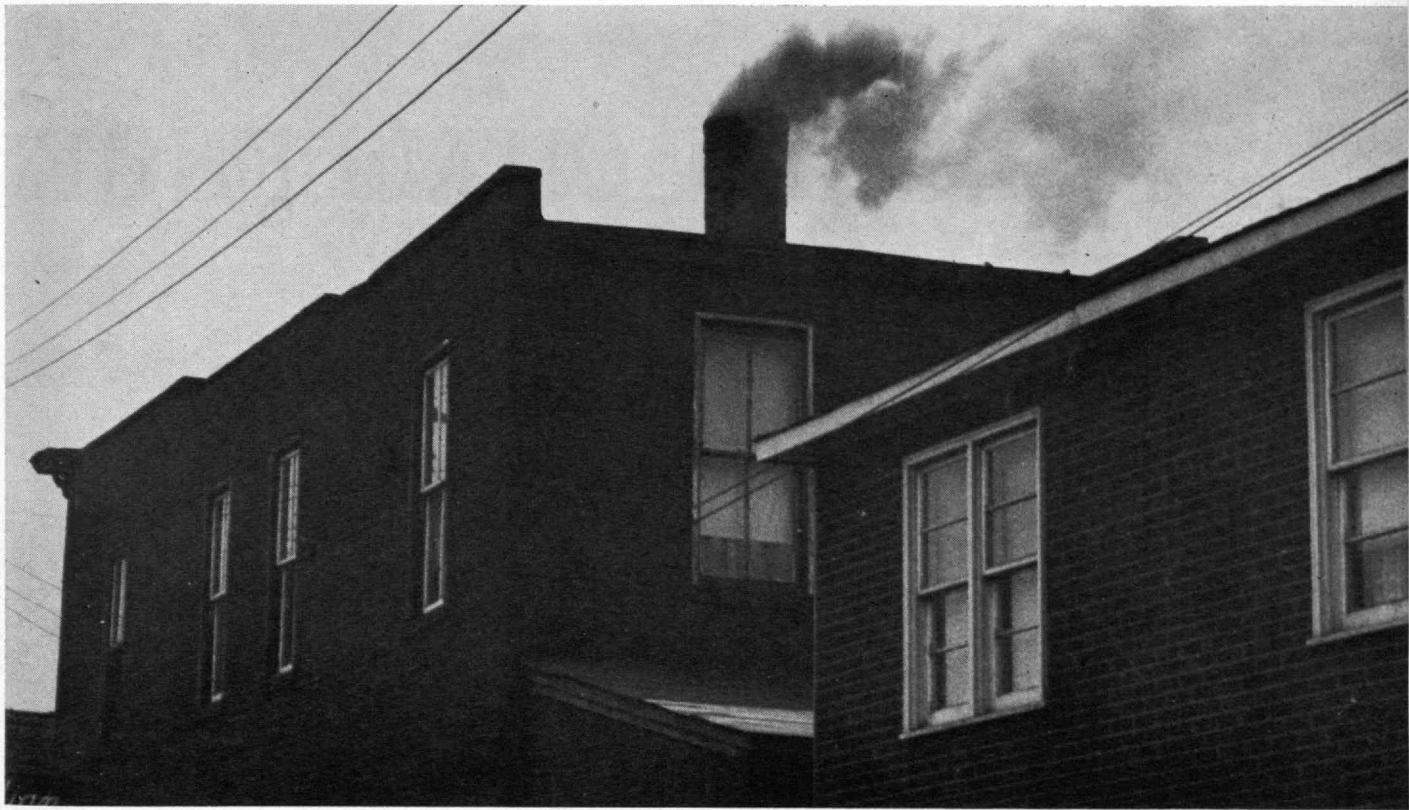
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# THE FUTURE



BLACK STAR

# OF OUR CITIES

*OUR CITIES' problems can be solved best by evoking the expertise of many disciplines, say the student sponsors of a special inter-collegiate conference convened at M.I.T. in April. Entitled, THE URBAN CHALLENGE, the three-day conference brought together a large number of eminent specialists in social, political, economic, and technical matters who dealt at length with the issues of urban renewal, transportation, and the future metropolis. The statements of the participants comprise an outstanding portfolio of current opinion on urban development which The Review presents this month on pages 18-41.*



# The URBAN CHALLENGE:



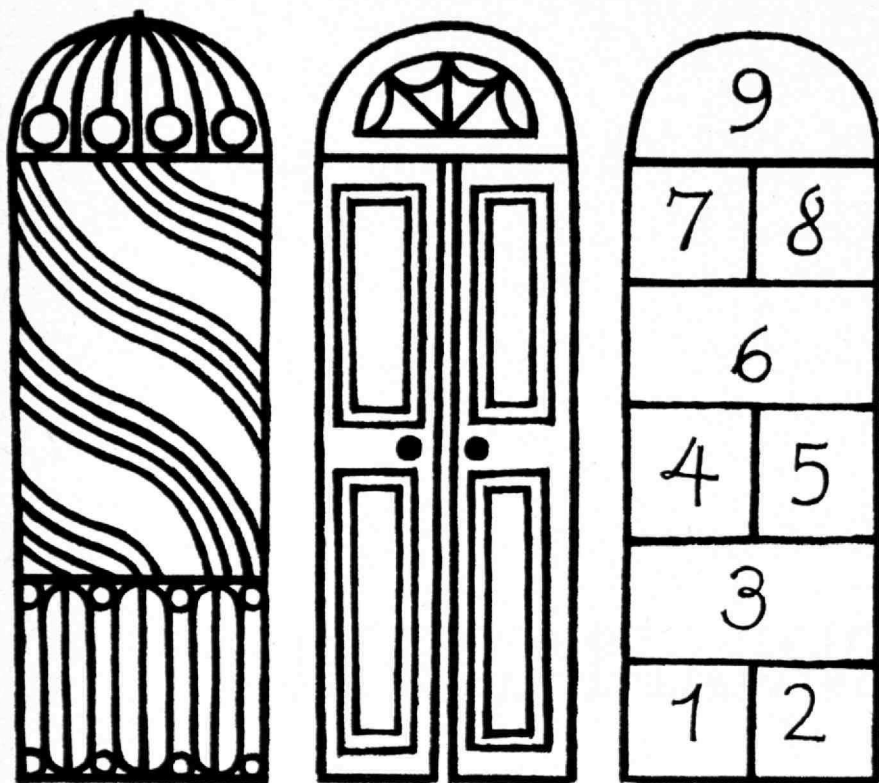
# A Thrust Toward Quality

Three concepts are essential to understanding the opportunity we have today to pioneer a new level of achievement for modern cities. First, there is now a truly intellectual ferment surrounding the assumptions about the processes of modern urban growth; at the poles of the great debate are the so-called Cassandra school of urban development, and the Pollyannas. Against this background of divided counsel, we must understand also the orders of magnitude that are involved in the problem, the sheer size of city building that the next generation faces in terms of people and shelter, of moving vehicles, and of water and land and other resources. Lastly, we must realize that the next five years are the critical period. Between now and 1972 our nation will make basic decisions that will mean irrevocable commitments for the next 40 years to the form, pattern, and style of urban life, the direction of our urban thrust.

In the course of the great debate about our urban community, the 1950's were characterized by the Cassandra view of the urban world. This was a set of provocative, eloquent, emotional analyses that found the urban pattern coming out of World War II extremely distasteful. They spoke about the barrenness and blight of our central city, about our suburban sprawl, about the modified Cape Cod colonial ranch house that seemed to be the predominant form of architecture, about the conformist world, about a whole bleak picture of the entire process of growth and expansion out of control. The proponents of this view argued that we had to have

**By Robert C. Wood**

*Dr. Wood is on leave from his position as Head of the M.I.T. Department of Political Science to serve as Under Secretary of the U.S. Department of Housing and Urban Development. This article is adapted from the opening address which he gave at the first session of The Urban Challenge conference.*



radical and rapid transformation if our cities were to survive.

As our research techniques improved and our methodologies expanded, as more and more able minds began to deal with the problems of urban life, a second more satisfied view came forward; we call its partisans the Pollyannas. As we began to ask ourselves questions of where industrial locations naturally occur, to trace a pattern of migration, to survey and list the character of urban politics and the urban political process, we found that urban life even in the great complexities of New York, Chicago, and Los Angeles was more and more predictable, understandable, capable of being dissected, capable of being described in terms of economic, political, and social systems. We began to have a sense that the confusion and the manifest disorder often covered some latent patterns and structures that were indeed definable, understandable, and predictable. For example, with the advantage of hindsight we found that the sort of conditions that provoked the riots in the Watts area of Los Angeles last summer had been painstakingly traced, mapped, and predicted in the cloistered halls of the University of California (Los Angeles) some four years in advance.

These new insights were joined to fresh and more powerful historical examinations that counterbalanced reports of violence, slum conditions, and transportation congestion. For example, we found that between 1950 and 1960 the absolute number of slum dwellings and substandard units was declining rapidly in the United States.

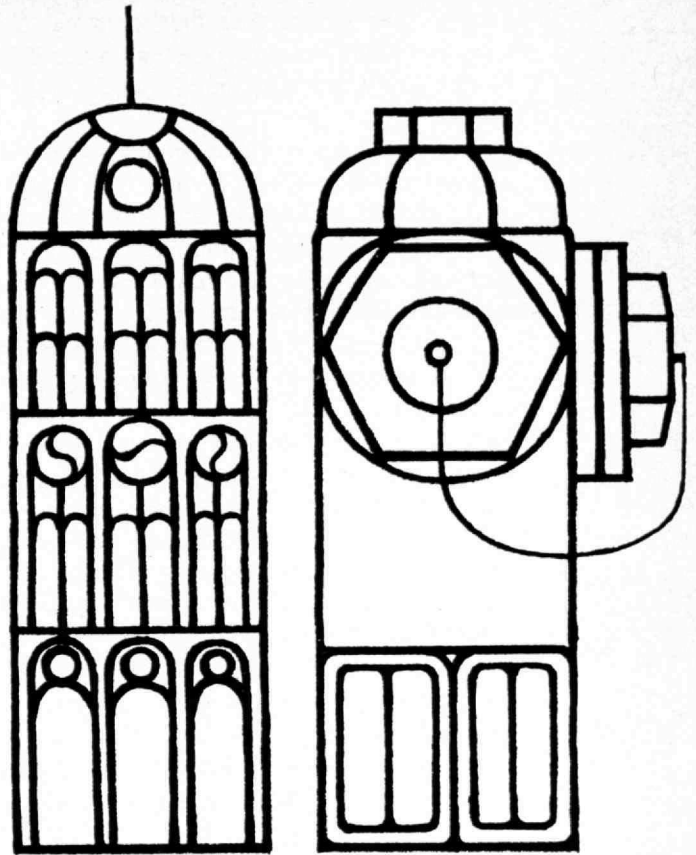
We discovered that between 1950 and 1960, for the first time in the history of the census, population densities were declining within even the most blighted slum areas.

Against these uncertain guideposts, one must set the second major dimension of the problem—the sheer orders of magnitude and the consequences that these orders of magnitude produce. Every year we are adding three to four million people to our urban population, and we will continue to do so at least until the year 2000. Unless we propose to modify the trend drastically, we have committed ourselves to an economy and to a population distribution that in relative terms will pull people out of the great heartland of America and push them to the rims of the country.

The average population loss of rural counties with communities not exceeding 25,000 has been 27 per cent in the last 10 years. And if present trends continue unimpeded by social policy, the larger cities of more than 500,000 population will grow more rapidly than the communities of 200,000. A whole series of complex economic and technological factors underlies this radical shift in population. Its result is that in the next 20 years, one way or another, this nation will build one-half again the total inventory of homes, factories, stores, office buildings, and apartment houses that has heretofore existed on this continent. We no longer have the choice whether to be engaged in the process of community building; our problem is rather how and why and where we choose to build.

Comparatively speaking, our housing supply is now





more adequate than it has been at any time in the Twentieth Century. In the last 20 years we have built up a generation of experience with programs that undertake to deal with the problems and dilemmas of the American city. We have had 20 years of urban renewal, 30 years of public housing, 10 years and more of the urban transportation programs. We are now within the second full generation of categorical welfare and relief programs, and we have new experience in the poverty, health, and education programs.

So we are now at the brief moment in history when there is no immediate urban crisis and when we have achieved substantial improvement in our understanding of our cities. Taken together, these two factors suggest that this is an extraordinarily exciting time of choice in urban affairs, a period of pause when we have an opportunity to determine whether some ingredients of quality might be interjected into our urban policies.

If one seeks to define the exciting and worthwhile attributes of urban life, he finds, I think, that the city more than any other dwelling place of mankind is a place for choice and a place for variety, that here above all one can choose one's job, one's fate, one's place of residence, one's place of relaxation from a most highly varied spectrum. This notion of open options, including the option to be anonymous and to find privacy, has been a sustaining force over and beyond the economic and social advantages that characterize large clusters of people.

In terms of quality, the goal for our cities may be expressed as this simple question of preserving the open

options, for it seems quite clear that today not all of the options are functioning. The poor and the Negro do not have an easy option to move out of the core center. The young family, having tasted city life and red wine and small walks and wanting to stay or move back into the central city, finds its choices of environment and of recreation polluted, cheapened. The question of how we want to shape the options—transportation systems, recreation, education, land uses, the role of technology—is the central question in the immediate years.

The program of urban development that has evolved with a consistent thread in the federal government, beginning in the Eisenhower administration, has more and more focused on the options and on the thrust for quality and potential. The efforts of the present Administration are essentially devoted to this strategy. We propose in the so-called "demonstration city" act to bring together and pool all the resources and talents and experience of 125 available urban aid programs from the various government departments; and in addition to make a block grant on top of this so as to give truly adequate opportunities to communities that want to respond with an order of magnitude equivalent to the problems and with the kind of comprehensiveness that recognizes the complexity of the system that is the city.

We propose also to balance concern for the central city and concern for the suburbs with a metropolitan program that will support those communities who in concert wish to bring their hospitals, airports, sanitary facilities, and water plants into conformity with the metro-

politan plan. And finally, we have suggested to the Congress for the second time that we ought to be able to support and encourage private enterprise if it chooses to build entirely new communities of 200,000 to 400,000 people.

With our present population growth we can move forward to build 10 or 12 of these each year if we choose. There is raw land where one can experiment most easily with new technology in housing, education, transportation, and community facilities. These are the places that most attract great architectural talents, and we have urged that no shortage of capital funds should so inhibit private investors that they would have to cheapen plans, cut corners, reduce green spaces, eliminate low-cost housing and so cut out the substance. In this effort, too, we are trying to maintain the thrust for quality and the thrust for options.

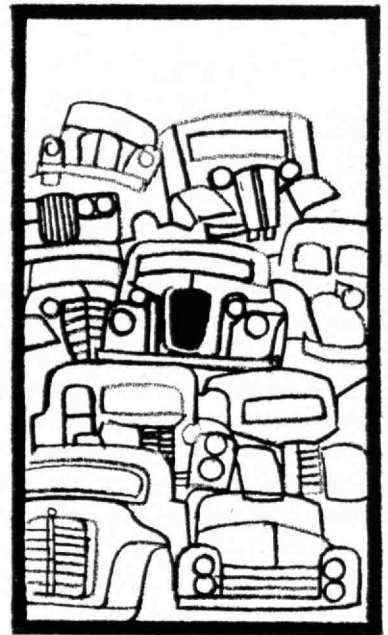
These are not programs that will come off the drawing board and into legislative bills automatically or easily, for they are part of that incredibly audacious effort of the Great Society to turn a quantitative democracy and a quantitative society into one with some qualitative aspects. It is true that most great cities of the world were not built by democracies, that Paris had radical surgery applied to it by Napoleon III, that the Scandinavians applied massive doses of public authority to achieve their land planning, that the great monuments and cathedrals and palaces of Latin America have come out of ruinous dictatorships. America's real urban challenge is whether in this democratic society we can give reality to the great potential of what American cities might be: the centers of a civilization that confounds the critics of materialism and consensus and gadgetry, that is worthy of respect and emulation around the world.

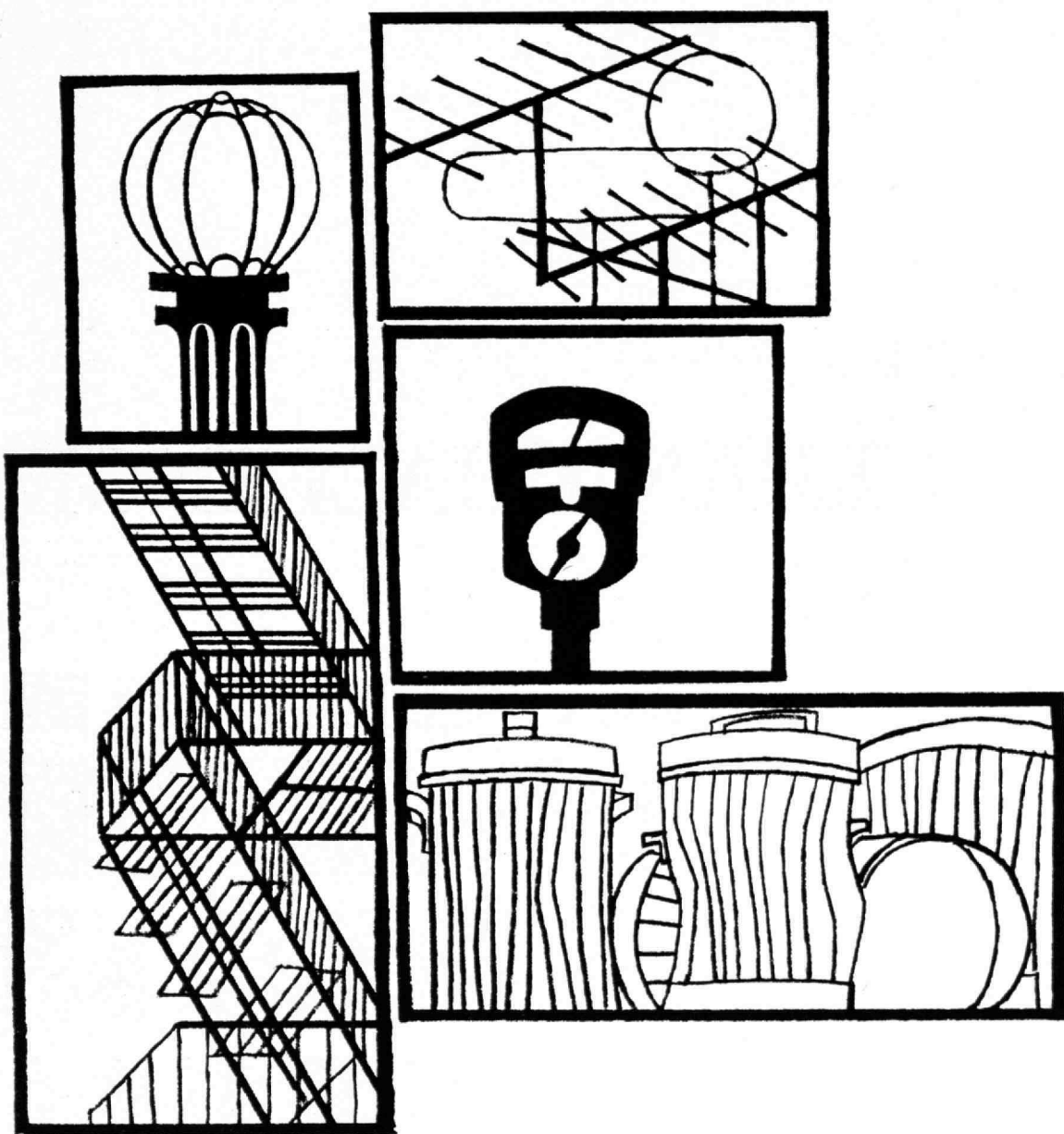
*Almost two-thirds of the world's population now resides in urban centers. This proportion will increase with the coming years.*

*Cities everywhere are undergoing dynamic expansion. But all too often this rapid growth leaves in its wake huge pockets of poverty and decay.*

*This is one of the foremost challenges of our time.*

*The unprecedented stresses of noise, monotony and crowding severely tax the health and well-being of man. The spread of communicable diseases, the pollution of air and water, and the blight of mental illness are but a few of the pervasive hazards of the world's congested urban centers. Their toll in human lives stunts the vitality of our society.*  
—Lyndon B. Johnson, in the 1966 World Health Day Proclamation.





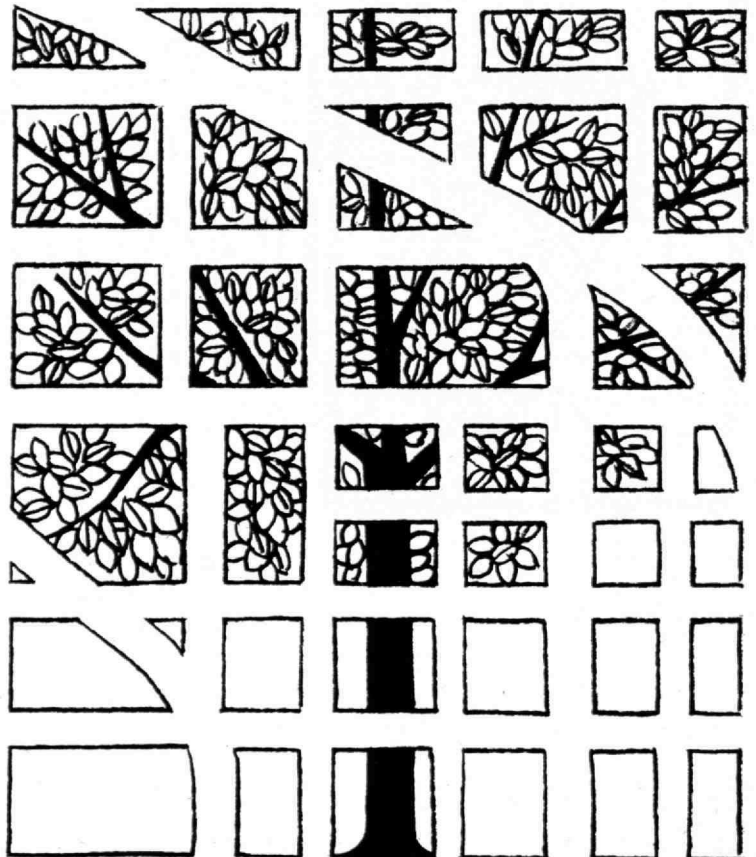
ILLUSTRATIONS BY DIETMAR WINKLER



# The URBAN CHALLENGE:

By F. Bradford Morse

*Congressman Morse is a member of the U.S. House of Representatives from Massachusetts' Fifth District, which includes the communities of Lawrence, Andover, and Lowell. A Republican, he is a graduate of Boston University Law School. This article is adapted from the keynote address which he gave at The Urban Challenge conference.*



# Government Isn't Ready

*The who of this story are the 70 per cent of the American people who now live in urban areas and the 31.5 million people who live in the Eastern Megalopolis. The what is the substance of our urban problems: housing, transportation, pollution, crime, education, employment, poverty, and health. The where is the three major urban belts: the megalopolis that reaches from Portland, Maine, to Norfolk, Va., the middle urban belt that centers along the Mississippi River, and the cities of the Pacific Coast. The when is yesterday. We are already far behind our needs.*

*It is the how that is the special responsibility of the politician. Whether we serve in Congress or the State House, we need the advice of architects, educators, planners, builders, and scientists. But we are the ones who must bear ultimate political responsibility. And the how of our urban story is essentially a political problem.*

**H**OW must we organize our governments to effect the kinds of programs we need to cope with the immense problems of urban life? We pose the question, yet even if we knew what programs and techniques could solve our urban problems, there is serious doubt that we are prepared, as a government, to implement them.

It has become a truism to say that urban problems do not respect state boundaries. Inevitably there is a Federal role in this area that cannot be overlooked. The question remains whether the Federal Government—through its executive or legislative branches—is properly equipped to play this role. There is also the related question regarding the adequacy of our concepts of government.

In my judgment, federal government participation in efforts to meet the urban challenge is deficient in co-ordination and in efficiency. Last year when the Congress considered the Administration proposal for a new Cabinet-level Department of Housing and Urban Development, we were told that this new body would co-ordinate the entire Federal urban establishment. This just wasn't so.

When we analyzed what the new Department would do, we found that it would do little more than elevate to Cabinet status the old Housing and Home Finance Agency, with its constituent agencies dealing with public housing, urban renewal, and community facilities. It

would not touch the more than 60 other Federal programs which have a direct bearing on urban problems. In fact, the new Department would not even incorporate two of the agencies which administer more than half of the Federal housing programs—the Veterans Administration and the Federal Home Loan Bank Board.

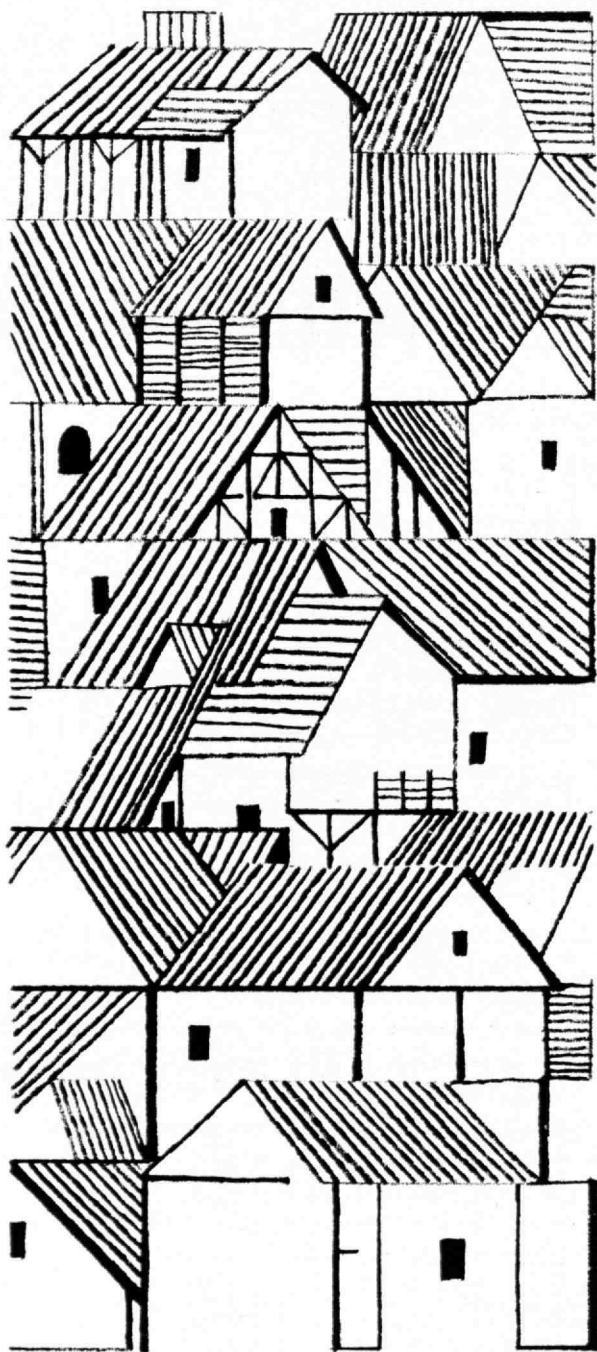
As an alternative, a number of minority Members of Congress proposed an Office of Community Development in the Executive Office of the President that could provide true one-stop service for state and local officials interested in bringing their communities into the federal programs. This proposal was the subject of a motion to substitute the Executive Office for the new Department. The motion failed but the wisdom of this position has, I think, already been demonstrated.

A few of the programs over which the new Department has no jurisdiction include the Federal highway program, the food stamp program and airport planning. This in spite of the fact that the new agency does govern the mass transit program, that the food stamp program is of principal benefit to urban residents, and that need for a co-ordinated approach to all forms of urban transportation is vital. There is still no means to co-ordinate such programs as education, public health and welfare, and civil rights, all of which have direct bearing on the conditions of urban life.

The Administration itself has acknowledged the inadequacy of the new Department. (It has been proposed that the Community Relations Service, established by the Civil Rights Act of 1964, be transferred from the Department of Commerce, not to the Department of Housing and Urban Development, but to the Department of Justice!)

The essential point we tried to make last year is simply that our urban problems are too big, too complex and too varied to be encompassed within a single Department. Therefore, we need a co-ordinating body to do this job, to ease the way for community officials in search of information, and to be sure that we are not working at cross purposes. We still need an Office of Community Development.

Every Member of Congress and every Senator has seen the problems faced by communities in their efforts to deal with the federal government. Not only must an official go from Department to Department in search of information, but he must also frequently go from bureau to bureau within those departments. The agencies do little to ease the burdens of these local officials. Recently, my office collected the information and application forms needed by urban officials to apply for federal grants or loans. The size of the pile is staggering. The community applying for a senior citizens' housing project, for example, must wade its way through a fact sheet on the program, the regulations governing its administration, an explanation of the form that must be submitted to assure compliance with the regulations, the assurance of compliance form, another explanation of the form for the loan, and the loan form itself, a





pamphlet on guides for project design, a supplemental information sheet, information on fallout shelter requirements, instructions on how to apply for organizational and development expenses, and model forms of incorporation and bylaws.

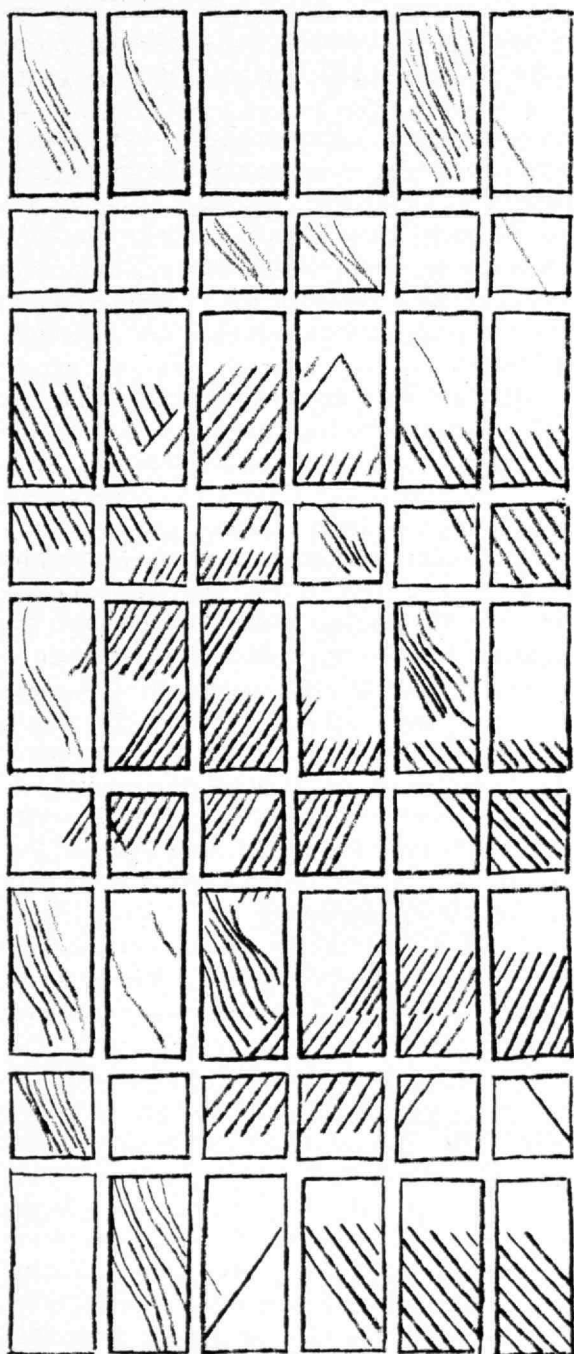
Then we come to the supplemental forms: the statement of housing demand, the official certification of authority, the statement of community interest, project characteristics data, engineering data, site data, financial data, legal data—all this for a single program! We also found that the manuals and materials needed by a community to file an application for a Head Start program under the Office of Economic Opportunity weighed 5½ pounds! Furthermore, the economic data required are not systematic or uniform. Similar but related calculations must be performed over and over again.

If the Executive Branch has failed in its responsibilities for co-ordination, the Congress has done little better. At the present time, there are no less than eight standing committees of the House of Representatives with jurisdiction over urban programs. The Committees on Agriculture, Banking and Currency, the District of Columbia, Education and Labor, Government Operations, Judiciary, Interstate and Foreign Commerce and Public Works all have significant areas of jurisdiction over urban problems. Given this wide dispersal of authority, co-ordination is practically impossible. In some instances our Committees may even be working at cross purposes. For example, while the Public Works Committee is considering legislation to build more highways to bring cars into the central city, the Housing Subcommittee of the House Banking and Currency Committee may be working on mass transit legislation designed to keep the cars out.

Water pollution is another example. The Banking and Currency Committee has jurisdiction over programs funded by the Community Facilities Administration of the Department of Housing and Urban Development for new sewage systems, while the Public Works Committee has jurisdiction over water pollution control programs which fund the construction of water treatment facilities. The relationship between these two urban functions is far closer in fact than this jurisdictional arrangement would suggest. The present system makes it impossible to consider the interrelationships between housing and education, between transportation and pollution, or between highways and open spaces.

The wise response to this confused situation would be to create a Committee of the House of Representatives on Urban Affairs and as federal involvement in urban affairs grows, so does interest in these proposals.

The value of such a committee has been demonstrated clearly this year. The President has recommended a Demonstration Cities Act that would encompass such programs as transportation, housing, urban renewal, welfare and economic opportunity. House consideration of this proposal could be much



more meaningful if an Urban Affairs Committee, benefiting from the expertise of Members from the eight Committees now charged with responsibility in this field, could have brought their mutual wisdom and understanding to the consideration of this major new legislation. Here is an opportunity for the Congress to do the co-ordinating job the Administration is not doing.

The point of this discussion of administrative arrangements is that there are a number of immediate steps that can be taken in the short run to smooth the relationships between urban areas and the Federal Government. In the long run, however, we must look beyond the easy administrative short cuts to a whole new concept of government.

Any consideration of the government of urbanization comes down to two basic questions: What is to be the jurisdiction and structure of government? Who is to govern?

It is clear that local governments are hard pressed to cope with the pressures of urbanization. The traditional view of the community as the center of work and play or public and private life has undergone drastic revision. No longer do many of our people live and work in the same place. Our suburbs have been the site of a tremendous influx of population bringing with it demands for services, schools and recreational facilities. The industrial base that could help finance these needs has not come so quickly. By the same token, the increase in commuting has brought a greater devotion of central city land to parking lots and garages, which generate less revenue for essential city services. Even when industry begins to follow the flight to the suburbs the revenue imbalance cannot be righted.

In large part the financial crisis of both city and suburb results from the reliance of these governmental units on the property tax as the principal source of revenue.

We also see local governments competing for external sources of revenue. States compete for the revenue generated by residents whose place of employment is located outside the state, and cities compete with suburbs and up-state areas for their share of state revenue. And all of this takes place within the framework of increasing federal contributions to the solution of urban problems. Many communities have found that the federal matching grant programs restrict their freedom to budget because they feel they must earmark available funds to programs that will generate federal dollars even though other more pressing needs should be met.

It is becoming increasingly clear that our cities must either receive considerably more help from other levels of government, or be granted power to raise additional revenue on their own.

One possible source of assistance comes to mind immediately. As the Heller Plan for the sharing of federal revenue with the states has appeared to lose favor with the Administration, it has gained support in Congress. With a number of my Republican colleagues in the House, and Senator Javits in the Senate, I have introduced legislation authorizing the return of 1 per cent

of federal income tax revenue to the states. The funds, which would amount to about \$2.5 billion in the first year, could be used for a broad range of health, education and welfare purposes. These might include pollution control, mental health and retardation prevention and treatment, expanded programs of special and supplementary education—the list is endless. There would be minimum federal control; funds would be allocated among states according to a careful formula reflecting population and need; and essential direction and execution would remain at the local level.

In my judgment, this approach could lessen federal administrative costs, permit greater flexibility in programming, and allow the allocation of funds more promptly and selectively.

We are undergoing a vast revolution in the representative character of our state governments. If the governments which result from this revolution more accurately represent the interests of their people and if they approach their task with freshness and vision, they will be better able to develop and administer their own programs.

At another level, we cannot talk about local government without assessing the revolution that has already overtaken it. The geographic boundaries and historic charters that once created obvious administrative divisions are no longer of central importance. Rivers, bays and mountains are no longer barriers to communication, nor does their presence automatically create a community of interest.

What are some of the factors that bind communities together? Functional interests have already been the foundation for hundreds of new governmental units: agencies and boards to run airports and ports, to administer reservoirs, to build highways and to educate children. The resident of Boston is governed not only by the city government, but by the Massachusetts Port Authority, the Metropolitan District Commission, the Massachusetts Bay Transportation Authority and a plethora of other boards and commissions. It is questionable whether the overlay of additional government units on top of traditional local government is an incentive or a barrier to sensible regional development.

How can we combine community of interest with ease of administration? It is arguable, for example, that the 21 towns that include portions of the Route 128 complex [around Boston] within their boundaries are less able to govern that area than some sort of functional administrative unit. No doubt the 574 firms and their 54,500 employees along the highway have a great deal in common, perhaps more so than with other members of their present geographic communities. By the same token, these firms and individuals share but one basic interest. Yet, there are other interests that they share with members of the present communities, perhaps to a greater degree. It is here, it seems to me, that the concept of functional government breaks down.

We must seek the proper mix between functional and geographic limits in the assignment of responsibility for urban government and administration. The alternatives

for local government are at least three. The first is annexation. A city can simply keep acquiring land and welding it into a single administrative unit. This cannot go on indefinitely however, particularly in an area as large as Megalopolis, where appropriate administrative divisions cross state boundaries.

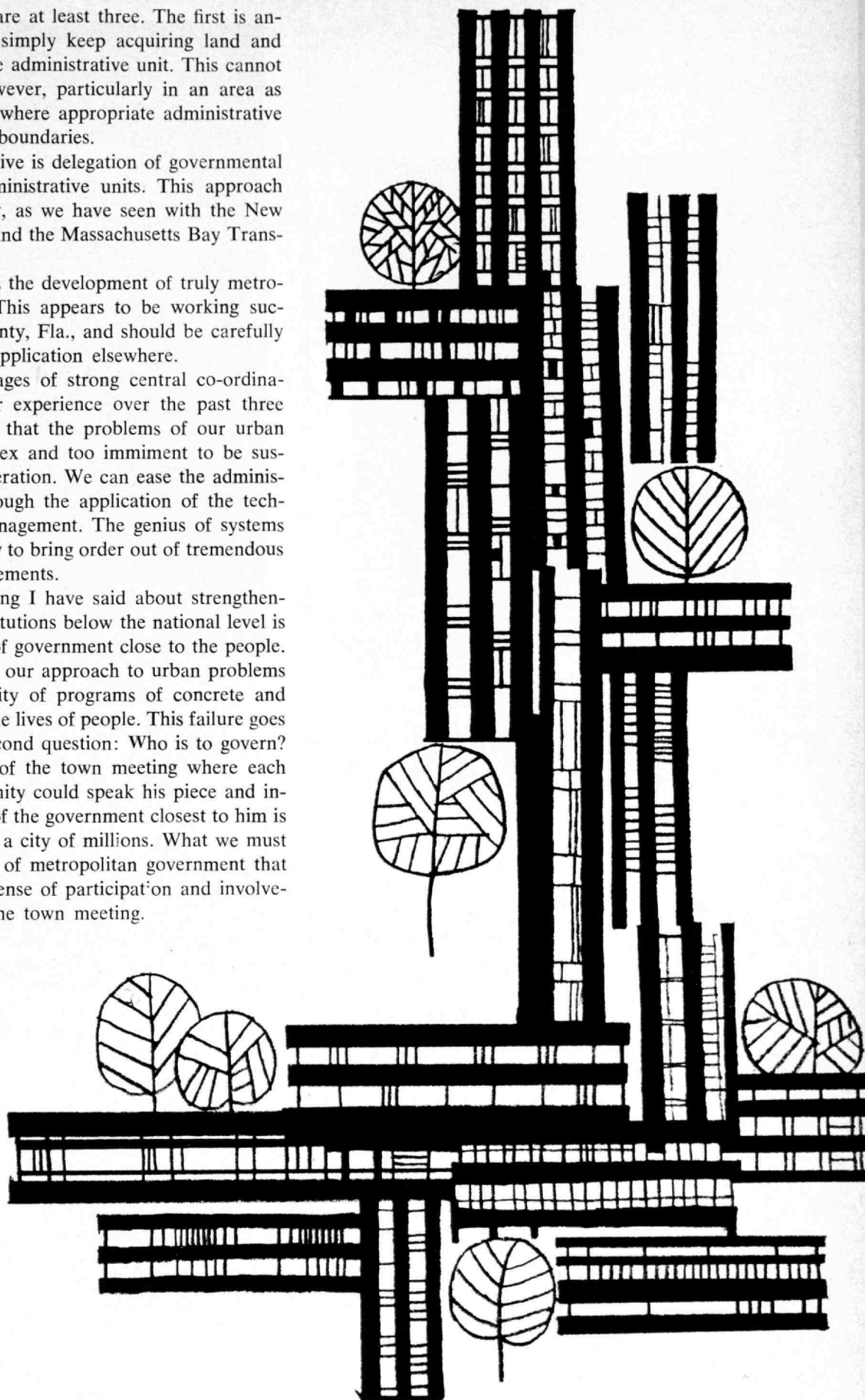
The second alternative is delegation of governmental power to specific administrative units. This approach has tremendous utility, as we have seen with the New York Port Authority and the Massachusetts Bay Transportation Authority.

A third approach is the development of truly metropolitan government. This appears to be working successfully in Dade County, Fla., and should be carefully studied for possible application elsewhere.

Whatever the averages of strong central co-ordination, I think that our experience over the past three decades demonstrates that the problems of our urban society are too complex and too imminent to be susceptible of central operation. We can ease the administrative difficulties through the application of the techniques of modern management. The genius of systems technology is its ability to bring order out of tremendous numbers of diverse elements.

Implicit in everything I have said about strengthening governmental institutions below the national level is the essential validity of government close to the people. One of the failures of our approach to urban problems thus far is the inability of programs of concrete and granite to transform the lives of people. This failure goes to the heart of the second question: Who is to govern?

The historic ideal of the town meeting where each citizen of the community could speak his piece and influence the decisions of the government closest to him is simply not feasible in a city of millions. What we must strive for is a system of metropolitan government that will give people the sense of participation and involvement envisioned by the town meeting.

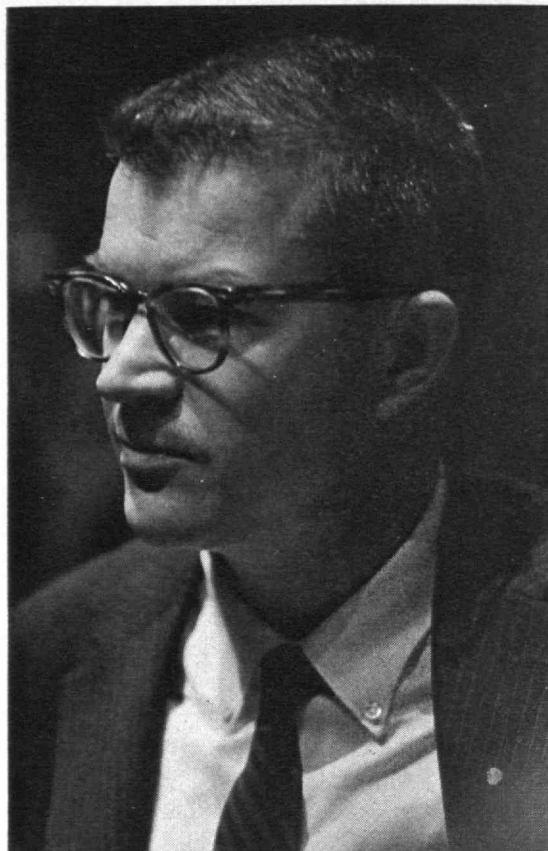


ILLUSTRATIONS BY DIETMAR WINKLER



# CITIES IN TRANSITION

*A sampling of opinion  
among participants in  
the debate on* THE URBAN  
CHALLENGE



**JOSEPH McC. LEIPER**, Director of Transportation Planning, Department of City Planning, City of New York . . .

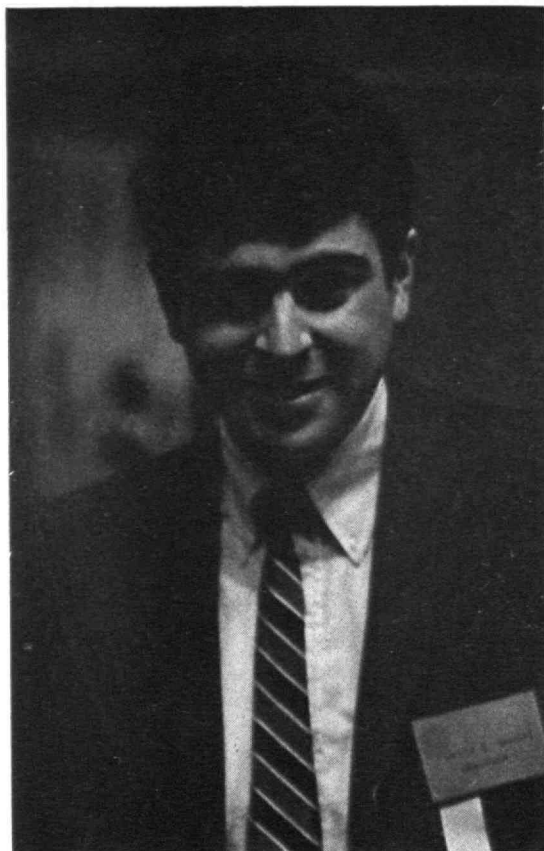
*"... the biggest area of opportunity in transportation systems planning today probably lies in the more sophisticated use of busses in our emerging intermediate size cities, [but] . . . over the next 10 to 20 years, we need to keep our thinking flexible to allow for technological change which is not entirely predictable and which I think is going to come. . . . maybe we can look forward in the future to the possibility of new types of urban transportation systems which may combine the best features of the flexibility of the automobile with the space efficiency of mass transit . . ."*



**EDWARD J. LOGUE**, Administrator, Boston Redevelopment Authority . . .

*"(Urban renewal) has to be a big enough operation to make a difference, not a pilot test in some obscure corner of some neighborhood; it has to be big enough to deal with the problem; it has to emphasize rehabilitation because there is no other way to deal comprehensively; it has to see the city doing its job in providing schools and other community facilities; . . . and it must emphasize a partnership process of planning with the people in the neighborhood that does not require unanimity.*

*"We have to have a concern, an effective concern, at that small moment in time when the architect is selected, for the quality of the environment that we are trying to produce . . ."*



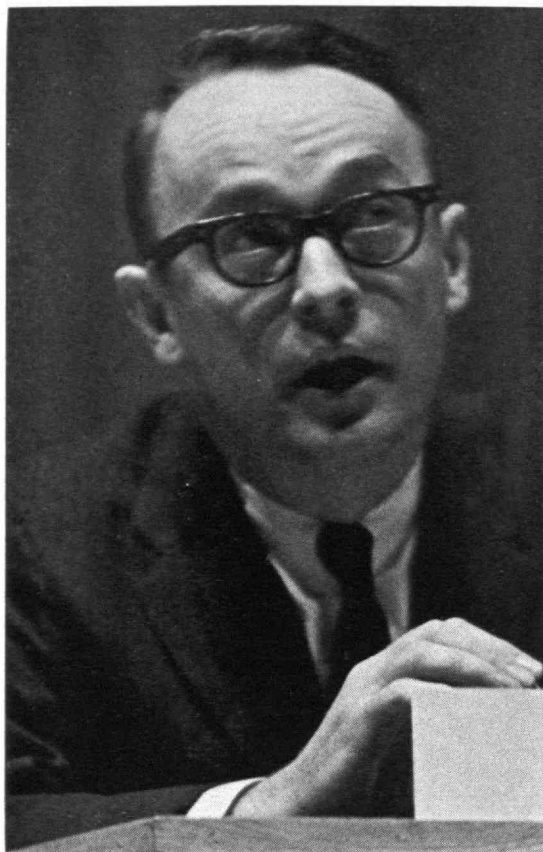
**DAVID S. MUNDEL**, '66, M.I.T., General Chairman of The Urban Challenge conference . . .

*"The most important breakthrough toward which we must strive in the next decade is the successful incorporation into our urban culture of the multitude of scientific advancements which we have made in the last decade. It is no longer enough that the engineer, the sociologist, the city planner, and a host of others be involved in the urban area. They must be involved together."*



**LOUIS SAUER**, architect and planner, consultant to the Department of Planning and Renewal, Camden, N.J. . . .

*"... I have learned that I, as an architect, cannot only deal with form and relationships between form and space, but absolutely must be concerned with political processes, with social problems, with economics, with technology; and I must find a way to (discover) that unique and specific form that not only allows all these processes and activities and institutions to benefit today, but which provides for a future that we don't know about."*



**JAMES Q. WILSON**, Director, Joint Center for Urban Studies of Harvard and M.I.T. . . .

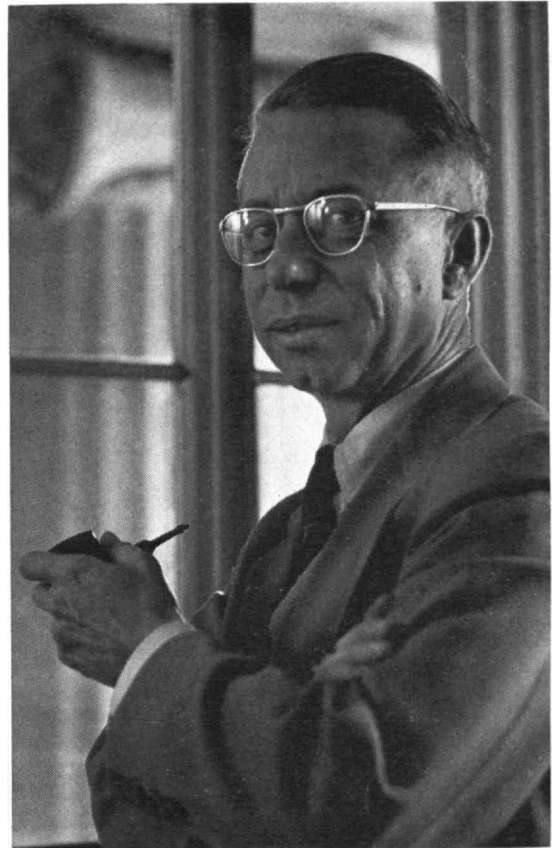
*"... I believe that the essential problems that we face in this country are human and not physical, that physical problems are to a great extent, but not entirely, the symptoms of human problems, and that until those human problems are solved we cannot expect to eliminate their physical consequences. . . . We ought to apply to urban renewal the same test we ought to apply to hospitals: that when the patient comes out, he ought not to be sicker than when he went in."*





**GENERAL RUSH B. LINCOLN, JR., '35**, General Manager, Massachusetts Bay Transportation Authority . . .

*"The regional nature of transportation is dictating areas of jurisdiction that are interstate in many cases, and multi-city or town in most cases. This immediately puts together the politics and economics of urban transportation. Boundaries for mass transit services must provide for meeting operating requirements based on the demand for service and must permit financing on a regional basis. Unfortunately, the natural transportation boundaries frequently do not correspond to political boundaries . . ."*



**PROFESSOR JOHN T. HOWARD, '35**, Head of the M.I.T. Department of City and Regional Planning . . .

*"I take the position that nobody has any business doing things to people for their own good, whether he is an expert political scientist or an expert architect or an expert administrator. The only basis on which in our kind of society a governmental agency has a right to push people around is for the good of some larger group to whom this pushing is essential, for the general public welfare. If the only issue is six adults living in a fire trap and risking their own lives, it is not up to government to tell them that they must live safely. This is a philosophical position which has its overtones for the way urban renewal is designed and administered."*

# The URBAN CHALLENGE:

## Toward The Plural City

By Leonard J. Fein

*Dr. Fein, Assistant Professor of Political Science at M.I.T., is a specialist in political theory, comparative political behavior, and minority discrimination. He is the editor of American Democracy: Essays on Image and Realities and the author of Politics in Israel. This article is taken from his lecture at the Urban Challenge conference session on "The Future Metropolis."*

What is the special magic of the city, what is the magic of *my* city? I think now of my four favorite cities, and wonder what it is that draws me to each. There is a connecting thread. Chicago is a city in which the fog creeps in on "little cat feet," providing a convenient camouflage for Al Capone. It is a city of danger and of vitality and, with the most amply developed park system I am aware of, of serenity as well.

Boston is the city of the Cabots, the Lodges, and Mrs. Hicks, of Reverend Reeb and Father Feeney, of magnificent civility and decorum and of monumental bigotry and deceit. The Charles is polluted, Beacon Hill is rat-

infested, yet the city has a sense of scale achieved by few others. It takes its past seriously, its present cynically, and its future casually, which is probably the only honest combination available.

Washington, the center of government without self-government, the heart of the nation so splendidly isolated from the body it leads and serves, the quietly elegant Georgetown and the unrelievedly squalid northeast neighborhoods—Washington is monument and façade simultaneously.

Finally, my favorite, Jerusalem, at least the Israeli half, to which my experience has been limited. Its name means "City of Peace," yet it is divided with a wall patrolled by armed sentries; the tallest building in Jewish Jerusalem is the Young Men's Christian Association, and its best restaurant is the Mandarin, serving kosher Chinese specialties. The tomb of King David abuts the site of the assumption of the Virgin Mary; the Valley of the Cross nestles next to a radically modern art museum; it is Middle East and Eighteenth Century Europe and America rolled into one.

In short, what all these cities share is their comprehension of diversity, in architecture and ethnicity, in culture and in values, in tone and in temper. I believe that we see the city as significant only because of this diversity, only because through diversity it offers choice, choice of friends and of tastes and of activities, of high culture and low culture and everything that falls between the two. Except as it offers choice, the city is a passing trinket, adorning mankind's age of concentrated



ILLUSTRATIONS BY DILL COLE



Were I an urban planner, I would, I suspect, be manic-depressive. Manic because the growth curves and charts and statistics all tell me that the closing decades of this century will offer the planner unprecedented scope, because the burden of our problems has now begun to convince at least some people that planning is our best defense against absolute chaos, because in my little workshop at home, with my little model buildings and my little model people, I could arrange and rearrange the figures and configurations to satisfy my wildest fantasies. Depressive, first because I would know that most people remain unpersuaded that my wisdom is superior to theirs, because save for suggesting how sewage might be more efficiently disposed and fires more quickly controlled, my counsel would not be really welcome, and second, because I would not evade the private burden of knowing how totally inadequate, how trivial, are my conceptions in confronting the problems we have. And so I should be torn. On the one hand, I would wish away all those people whose venality, whose ignorance and selfishness and stolidity and flabbiness prevents my song from being sung. If only the real world would allow me to arrange it as compellingly as I arrange my models. On the other hand, were I asked to sing my song, my voice would likely quaver, my knees wobble, and I might, indeed, be sick with fright. For what arrogance allows me to set my song against the unplanned but richly orchestrated cacophony of generations?

How may these visions be realized? I have no easy answer. It is, perhaps, not so very difficult when we speak of the new towns, for there we have less to overcome. For the greater challenge, for the task of rebuilding and recreating what we now have, I can suggest only that the process must be something like that of carving an elephant out of marble. The instruction to the sculptor there is to take a big block of marble and chip away everything that doesn't look like an elephant. So, too, in the city, perhaps we need to chip away what does not look like the city we define. It does not frighten me that many sculptors will undertake the task, nor even that in our pursuit of the best elephant we may find that some prefer the tusks and some the tail, some the hide and some the head. There is no one true city, and hence no one true plan.

There are the cities of all our private songs, and the greatness of the challenge is to create that environment which will encourage all the singers, urge songs upon the mute, yet somehow make of the result not noise, but music. To do that, I suggest we need less to change the songs and blend them into one as to retune our ears so that we can hear music in the plural themes.

commerce but hardly worth the time and energy we invest in its preservation.

Nor will it do to delude ourselves and others by suggesting that mere change in the physical environment, or mere availability of what a minority defines as better choices, will elicit popular enthusiasm. There is no herd out there, dumbly prepared to follow whither we wise men lead. Out there are people with tastes and values and problems no less authentic than our own, and the city of our dreams may not respond, indeed may violate, their visions.

Yet, I would not want to discourage the utopians. I do not know whether the tomorrows they foretell are those for which I, too, labor, or whether their own hopes are inarticulate and unarticulated longings. However, neither would I be willing to let one man's utopia become society's policy, the private vision become the public plan. Not efficiency nor economy nor even neatness, the apparent ideal of most planners, is an intrinsically meritorious goal.

If the hallmark of the city is diversity, then all men's plans—those elaborately conceived and eloquently defended by the planners themselves, and those gropingly sought after, dimly if at all perceived; the malls and the monuments and the mile-high skyscrapers, the neighborhoods and the new towns and the nirvanas—all these must fight it out and be fought out, one by one, piece by piece, until, mutilated and misshapen, they emerge from the battle into policy and then reality. It is not a pretty picture, it is often a caricature, but I know no other way, I know of no men or group of men to whose powers of divination I would easily entrust my own tastes and predispositions. I know no city so consensual that all men's tomorrows are as one; nor, were there such a place, would I care to dwell there long; nor, were there such a place, would it be what I call a city. If the city is not diversity, it is no city; if it is diversity, then plans are politics, fair game for us all.

More still: If the city is diversity, then can the planners plan at all? Can diversity be planned? Can the slide rule and the draftsman's board ordain the gentle chaos that diversity implies? All have seen the striking pictures of tomorrow's cities. Here and there, one finds enchantment. But, for the most part, there is an aseptic sameness about them. I cannot imagine wandering through their pristine plazas with any sense of wonderment, with any hope that around the coming corner I will find that startling juxtaposition which helps to make the city what it is.

There is little surprise in store for us tomorrow, only cleverness and gimmickry. With William Whyte, we shall search in vain for "at least one hideous house to relieve the good taste." The prevailing myth holds that if the automobile is banished from the central business district, and all buildings are neat and clean, the quality of our life will change. It is a myth that appeals to our anality, our sense of order, it is the Colgate-Palmolive city as interpreted by Price-Waterhouse, and all the guts are gone. I have in mind a verse by Carl Sandburg.

When will the efficiency engineers and the poets  
get together on a program?  
Will that be a cold day? will that be a special hour?  
Will somebody be cuckoo then?  
And if so, who?

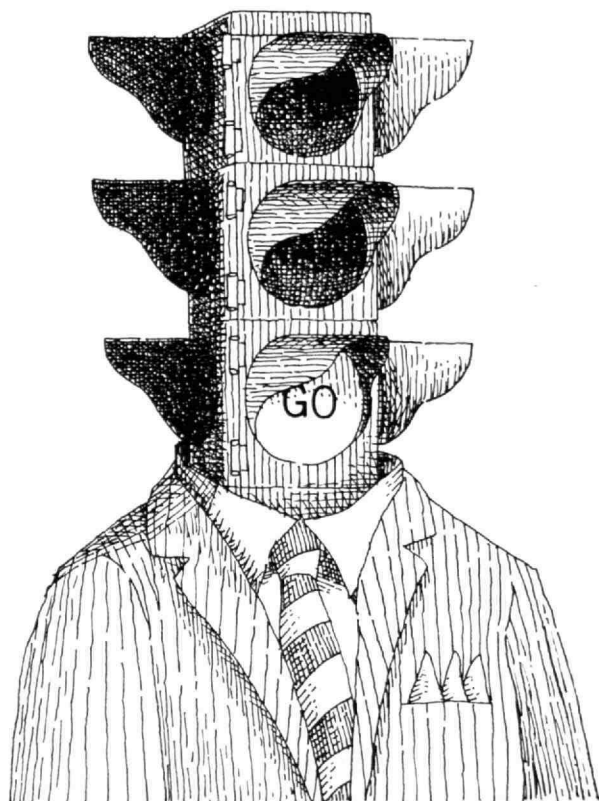
And yet, withal, I am no Luddite of the city, singing  
a nostalgic song, celebrating the dirt and noise and shab-  
biness of Trenton, of Milwaukee, or a hundred other  
Trentons and Milwaukees. Sandburg's verse begins with  
these lines:

Who can make a poem of the depths of weariness  
bringing meaning to those never in the depths?  
Those who order what they please  
when they choose to have it—  
can they understand the many down under  
who come home to their wives and children at  
night  
and night after night as yet too brave and un-  
broken  
to say, "I ache all over"?  
How can a poem deal with production cost  
and leave out definite misery paying  
a permanent price in shattered health and early  
old age?

I see no redeeming virtue in dirt. My redemption is  
in disorder, in the subtle chaos which both reflects and  
encourages that interpersonal disorder which in turn  
staves off boredom. Against the sterile soporific city I  
place my vision of a city not wholly comprehensible.

And if not wholly comprehensible, then not wholly  
plannable. Not *wholly* plannable, for there are mat-  
ters of such pressing import that we cannot turn our  
backs upon the city and wait for some mysterious invis-  
ible hand to determine its destiny. There is no invisible  
hand. If it is not our hand which draws the plans, then  
it will be others, more avaricious and less sensitive,  
whose hands will do the work. Our problem is that we  
must plan, even though we lack the wisdom to build the  
eternal city. We must plan, knowing that in 50 years  
what we have seen as wise and right will surely be found  
sorely wanting. Yet I think it important to keep a sense  
of perspective here. For want of it, we are inclined to  
exaggerate the problem, and to turn in terror to those  
whose plans and capital are vast, to those who pretend to  
have solved all our problems with one neat formula.

No one neat formula will do, first because we do not  
know the right formula; second, because most of the  
presently available formulas seek to de-urbanize the  
city; and, finally, because the very notion that any one  
formula will do also violates the diversity we seek to  
preserve. What we ought to be after is the piecemeal  
plan based not on statistical averages but on statisti-  
cal distributions. I see no romance in a city built for  
the benefit of those who fall within one standard devia-  
tion from the mean. Unless I am vastly mistaken, our  
people are not neatly distributed along a normal curve;  
the curve, at best, is polymodal, and I would wish our  
cities to reflect the several modes. Indeed, our people  
are not neatly distributed along one measurable dimen-  
sion; there are many dimensions, and hence many  
curves, and I would wish our cities to reflect them all.



I speak, then, of the plural city: plural in its social structure, in its policies, in its planning processes. In each case, there are powerful and popular myths that speak of other and competing visions. It is, in short, not only the landscape of our cities which impedes community; it is our very ideology.

► Plural in social structure. The conventional wisdom has it that the city is the melting pot, the giant cauldron from which unhyphenated Americans are mechanically spewed forth. There is substantial dispute among sociologists as to whether this view of the city as a melting pot is sound description. Some find important meanings in the ties of kinship and ethnicity and religion and class; others see these as passingly significant, destined shortly to be cast aside. My own judgment is that they matter still, and are not doomed as meaningful bases of association so long as our plans themselves do not condemn them.

Intellectuals debate not the descriptive merit of the melting pot, but its normative propriety. Should we, in our public pronouncements and in our policy planning, encourage the associational ties on which community is based? Can *gesellschaft* encompass *gemeinschaft*? Is it possible, in short, to build a city with all the virtues of anonymity and interaction, at the same time that we build communities with private understandings of the world and localized roots? And, if it is possible to maximize both localism and cosmopolitanism, is it desirable?

I am convinced that it is not only desirable, but necessary, if the city is to avoid becoming the caricatured monstrosity so many see in it already. I think it desirable because I have in mind a simple model in which group structure is defined by two variables: cohesion and interaction. Where the internal cohesion of groups is high, and the interaction of groups with each other is low, we have an essentially feudal society. That, presumably, is what the small town is all about. Where group cohesion is low, and interaction is high, I take it that we are confronted with the mass society—unstructured interaction, rootlessness, ultimately anomie. On the other hand, the concept of pluralism calls for well-defined groups with substantial overlap and significant interaction. It raises certain dangers, including the prospect of ghettoization, at least for significant numbers of people. I confess I am less concerned by such dangers than by the prospect of a formless city. Diversity is no synonym for the formless void, for randomness. My own recipe is not for melting pot, but, if you will, for beef stew, a loose and pungent gravy connecting identifiable chunks of this and that. I like the analogy because little bits and pieces are constantly breaking off from the larger coagulations and getting lost somewhere in the general mess. So be it. For those who prefer the more absolute anonymity, and for those who prefer the sense of village in the city, both are possible. For the rest, there is the happy interaction of people secure in their own belongingness. It is not orderly, by any means, but neither is our picture of ourselves and what we want.

Perhaps an illustration will help to clarify the imagery.

Over the coming decades the future of the American city is dramatically and inevitably bound up with the future of the American Negro. I do not think there is an identity between what we call the urban problem and what we call the Negro problem, but there is a good deal of overlap between the two. It seems to me that one of the central problems of the Negro leadership is that they are caught in a complex contradiction.

For many, many years, Negro and White liberals alike have been arguing with their benighted compatriots that Negro-ness was an irrelevant, a trivial variable, that the color of a man's skin in no way determined what sort of man he was. Time after time, thoughtful scientists have felt it necessary to issue lengthy findings assuring the public that pigmentation was no matter. The logical conclusion out of all this reasoning has been that the ideal society is the color-blind society in which, presumably, Negroes would be randomly distributed throughout the population.

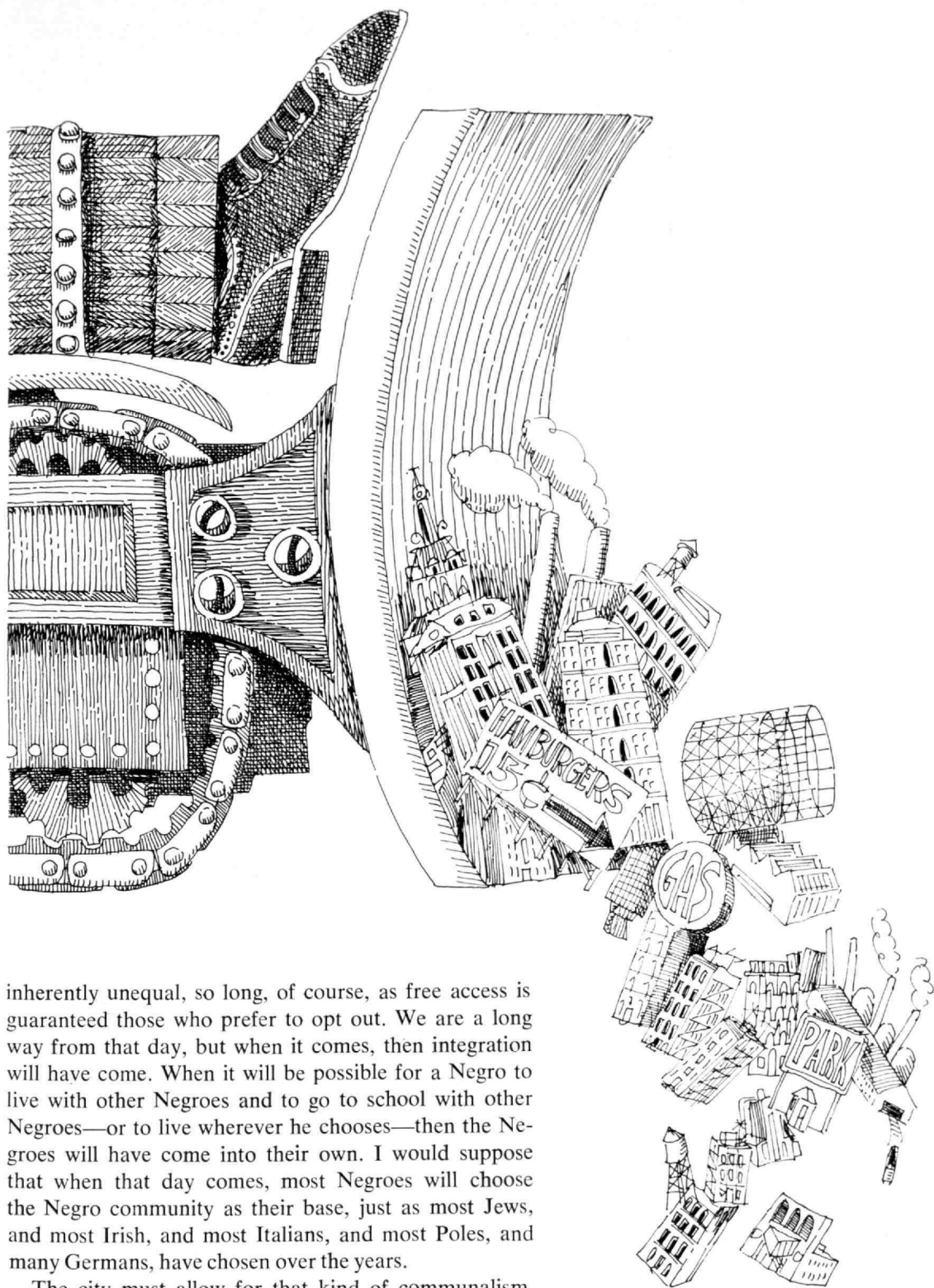
Two discoveries have violated this idyllic picture. The first is that no group is randomly distributed in our society. Most powerfully in *Beyond the Melting Pot* [Nathan Glazer and Daniel Moynihan], but elsewhere as well, it has been demonstrated that different groups monopolize different occupational strata, different values, and different propensities. If the Negroes are a group, then the expectation of randomness is historically untenable. But what if the Negroes are not a group? For, if color is no matter, no matter at all, then what makes of them a group? There is no need to argue this matter theoretically, for the massive discovery of the last decade is that the Negroes are, indeed, a group, that whatever their liabilities, their most powerful asset is concerted action.

Indeed, my guess would be that in the long sweep of history, the civil rights movement will turn out to have been less important for the specific political victories it has won, and more important for having provided the Negro quite visibly with many of the attributes of America's other groups—heroes and place names and dates and music and literature and, preeminently, a sense of community.

If that is so, however, we shall likely find an increased alienation of the White liberal or quasi-liberal from the Negro. For the common understanding is still the earlier understanding, which sees the Negro as an accident. There are powerful reasons behind the anti-discrimination legislation we are developing now at last, and there is a powerful rationale specifically for the new Massachusetts racial imbalance law, which holds illegal any school whose student body is more than half Negro. These remedies are necessary compensations for a grotesque and tragic history. But they are remedies, and I can easily foresee the time when they will have outlived their remedial utility, when separating the Negro out as a special case, to be treated differently from all our other groups, will seem ridiculous.

I can foresee, too, that there may come a day on which the Negro will himself insist that separation is not

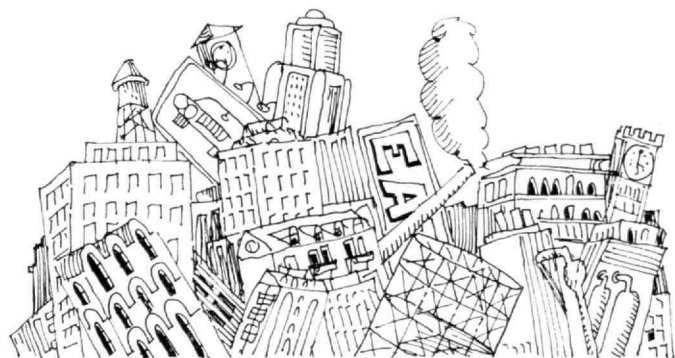




inherently unequal, so long, of course, as free access is guaranteed those who prefer to opt out. We are a long way from that day, but when it comes, then integration will have come. When it will be possible for a Negro to live with other Negroes and to go to school with other Negroes—or to live wherever he chooses—then the Negroes will have come into their own. I would suppose that when that day comes, most Negroes will choose the Negro community as their base, just as most Jews, and most Irish, and most Italians, and most Poles, and many Germans, have chosen over the years.

The city must allow for that kind of communalism. It cannot be built—at any rate, it ought not be built—on the false doctrine that holds brotherhood to mean facelessness, or in the pernicious belief that differences are illegitimate.

Lawrence Haworth says much the same thing when he defines the problem of the city as one “of restoring community to the city in such a way that the distinctive contribution of city life, the wealth of opportunity it offers, is not lost.” Henry Churchill says it in holding our problem to be “one of making the city tolerable and still keeping it the City.” Jane Jacobs has said it,





and Hebert Gans has said it, and so have an increasing number of urban commentators.

Excepting but a few, however, most of those who have asserted the continuing need for community have either been moral hemophiliacs, who bleed for mankind at the slightest provocation, but whose indiscriminate hemorrhaging leaves them weak and ineffectual, or noble savages, who equate the city with sin, who believe, with Josiah Strong, that "The first city was built by the first murderer, and crime and vice and wretchedness have festered in it ever since," and whose idyllic vision of the city is best approached by the Garden of Eden before Adam and Eve moved in. Sometimes blatantly and sometimes subtly, the argument of the communalists has been that the problem with the city is that it's a city, and that its redemption lies in de-urbanizing it as completely and radically as possible.

Instead I seek the best of two worlds, molded into a third and different world in which localism and urbaneness coexist, with some of its people and neighborhoods wholly ghettoized, if so they will it, and others wholly rootless, if that is their choice, and still others sharing both propensities. This is no easy matter, for it is difficult at best to maximize at once both community and interaction. The same walls that are erected to define the community serve also the purpose of keeping the strangers out. The same freedom which leads to inter-

action undermines community. Some will want to emphasize the walls, and some the freedom. We who would plan for all must guard against the excesses of each. I take the excess of the barrier-builders as a smug avoidance of involvement, an artificial isolation from the larger whole. Good fences may make good neighbors, but something more is needed still.

The excess of those who would have done with walls and fences I take to be a blindness to men's diversity and the strength that that diversity may bring. In the building of community we need not be restricted to the communities suggested by ethnic or religious ties, nor even ties of class; we now approach the time when man will be able to impose his own forms of pluralism on his city, when instead of the inherited pluralism we know today we shall be able, if we choose, to build a pluralism out of taste and inclination.

The social structure I have implied suggests quite clearly what planners are now thinking about and busily engaged upon: the network city, with diverse nodes and nuclei connected to each other in a coherent whole, and with a definitive center. Like all pat answers, the polynucleated city tends, however, to be oversold as a solution. Diagnosis is, after all, easier than prescription, and the physical design of the city—the hard choices as to the kind of homogeneity one builds into planning, and the ways in which one designs for diversity—remain

unsolved, and perhaps, insoluble. I suspect, however, that they approach solubility *only* if we recognize that when we have said the social structure and said the physical structure, we have not yet said all, by any means; architecture and sociology do not, even when more happily blended than is generally the case, solve all our problems. They may provide the necessary conditions for the decent city; alone, they are insufficient. The same concern with pluralism in our group life and in our buildings that we now so wisely begin to demonstrate has its counterpart in politics and planning.

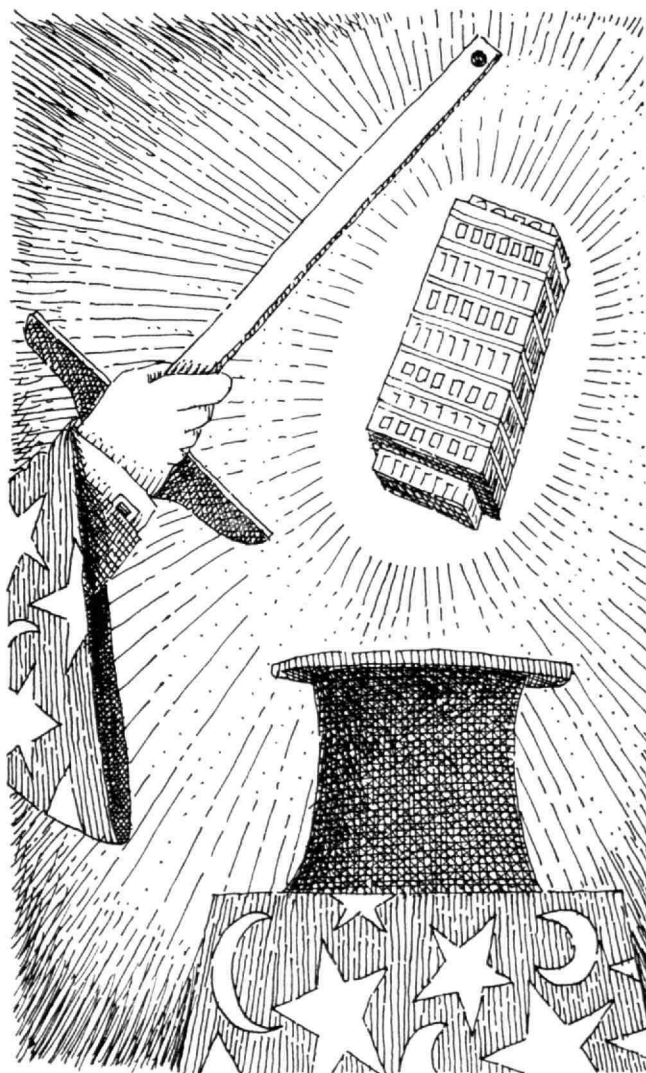
► Plural in politics. Once again, the myth would have it otherwise. At about the turn of the century, there sprang up the slogan that the goals of city government were, or ought to be, efficiency and economy. In the conventional understanding there was no Republican or Democratic way to pave a street or collect the garbage. That understanding persists quite strongly today. It is the ideological counterpart of the social melting pot, only here it is ideas and values that are repressed instead of faces. Much of the emotional appeal of metropolitan government derives precisely from the earlier tradition of efficiency and economy in government; it is but one more example, by and large, of a politics of anality.

There is no intrinsic value in either efficiency or economy, nor is it true that the choice between asphalt and concrete for our streets is apolitical. There are any number of situations in which human beings, including the most rational among us, prefer to maximize values quite clearly at odds with efficiency, and it is no different for the city. We do not, for example, put the incurably ill to death; we maintain elaborate facilities to keep them alive as long as possible, a most inefficient procedure; it is hardly sound economics to permit churches and universities to go untaxed, yet we do it. The most that can be said is that, other things being equal, efficiency and economy are worthwhile goals.

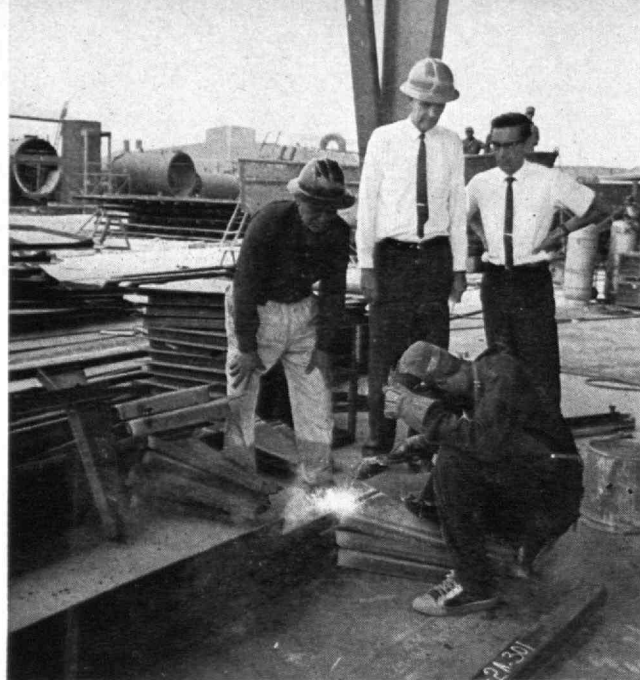
But other things are rarely, if ever, equal. And efficiency is an inadequate guide to action. Are patches of green amidst the concrete efficient? Perhaps people do work more happily, and hence more efficiently as well, if the monotony is relieved. But it is not for efficiency's sake that we want to surround ourselves with beauty, nor ought we feel constrained to justify all our activities in economic terms. So, too, our notion of the non-partisan nature of the urban problem is nonsense. There is, in fact, a highly partisan issue in whether a road shall be built at all. The political problem is always how to spend the scarce resources of the society, whether to build roads or schools, airports or hospitals, jails or gardens. These are very properly matters for intense debate, and no computerized operation can ever make a choice except as our programs specify our values.

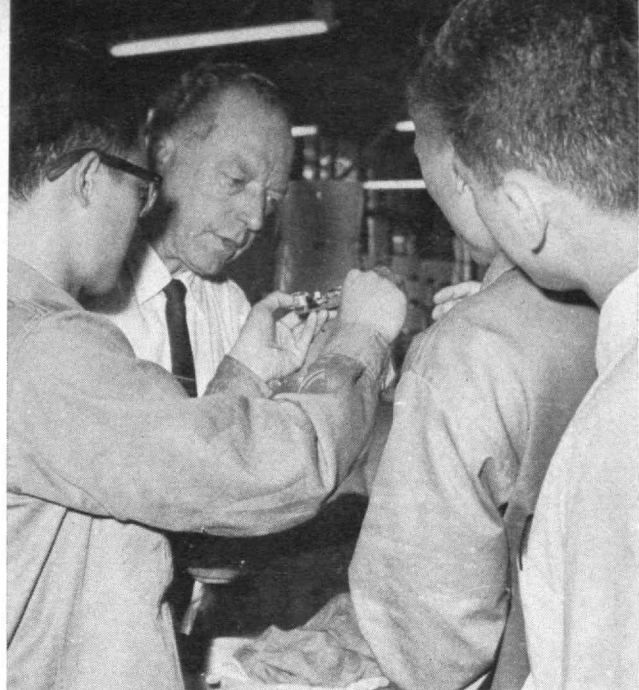
I have suggested that much of the urge towards metropolitan government derives from these same fallacies, from this same preoccupation with order. I do not mean by this that the 1400 governments of New York City make good sense, nor that the proliferation of govern-

*(Continued on page 57)*









# EXECUTIVES ON LOAN TO THE WORLD

Allan L. Dunning, '32, formerly with the Electric Boat Division of General Dynamics, is an IESC volunteer who applied his expert knowledge to problems at Promecan Ingenieros S.A., a shipbuilding and metalworking firm in Lima, Peru (left and top left). Other photos show Loren Fletcher, former International Vice-president of the Carrier Corporation, discussing design and assembly problems with engineers at Tatung Engineering Company in Taipei, Taiwan.

A utilities company in Nigeria needs a skilled executive. A mining firm in El Salvador requests a senior engineering consultant. These are just two of the many applications for help that have come to the International Executive Service Corps this year. IESC, explains Marvin Pierce, '18, its Director of Organizational Relations and principal recruiter, is a managerial task force of veteran American businessmen who are available on loan to private firms in developing countries for help in solving technical or management problems. Overseas companies applying to the nonprofit organization receive specialized assistance from volunteer executives, most of them retired, who work abroad without compensation for a period of from two to four months. Since it was started early in 1964, IESC has taken on 175 projects in Central and South America, in Africa, and in the Middle and Far East. Right now it is seeking recruits for 63 of the projects and volunteers may write to IESC offices at 720 Fifth Avenue, New York City.

IESC was first suggested at the 1963 International Management Conference in New York by David Rockefeller, now Chairman of the Board, and it was established the next year by private businessmen with the support of the Agency for International Development. At the time, the organizing committee observed that "large scale government-to-government aid lacked two important elements as a stimulus to the development of vigorous free economies in the emerging nations. In the first place, it did not provide sufficient opportunity for the private sector in American life to participate directly in the creation of a strong private sector overseas. In the second place, massive injections of funds to close the capital gap between the developed and the developing nations did not alleviate what has been called 'the second gap,' the discrepancy in human skills. The developing nations simply did not have the vast resources in managerial talent and experience that are such vital factors in the dynamic American economy."

The new corps was launched in June, 1964, by President Johnson, who called it . . . "a most important contribution . . . to the economic development of the free world."

# HOW SOUR

By Klaus Liepmann





# *SWEET MUSIC IS*

*when time is broke*

*and no proportion kept!*

KING RICHARD II



To this day one can find traces of the age-old suspicion of the artist in our society. One does not hear any more the call, "take in the laundry and lock up the silver, the musicians are coming," but musicians are still somewhat suspect because they "get paid for what is fun."

A good musician has to use not only his hands, but also his brain. He has to be highly trained in the history of music, in traditional idioms, in the idiosyncrasies of composers and performers of the past. He needs to know the entire standard literature: chamber music, symphonies, operas, choral works, the piano repertoire—all of it—be he a violinist, pianist, wind-player, singer, conductor, or whatever. Only thus trained will the player of a great orchestra under a good conductor display an awareness of the total musical plan at all times: he will come forward as momentary soloist, merge into the background, oppose other instruments, combine with them in everchanging variety and according to the conception of the conductor.

Left: 16th Century woodcuts by Jörg Kölderer of Maximilian's Triumphal Procession.

*'No amateur orchestra can come near the spirit—let alone the letter—of the orchestral music of the 19th century.'*

The worst misconception about professional musicians is that they use the music which they perform merely as a vehicle for self-expression or a means for self-glorification. The best musicians know that their art is a never-ending quest for perfection—a perfection which can never be reached. Toscanini would study Beethoven's Fifth forever anew, as if he had never known the work, and he was *never* satisfied with himself. That's why it seems rather ridiculous to me when some youngster who knows it all by way of records, books, and lecture courses, declares "Toscanini really does not do justice to Beethoven in this performance."

The ideal musical amateur has many attributes in common with the professional musician: dedication to the art, an indefatigable love for music, respect for the masters, and the never ending quest for perfection. But these, of course, are attributes which are easier to preach than to practice.

In addition, the amateur has the power to sustain morally and physically the musical life of the community—not an easy task. It becomes continuously harder because of the increasing expenses, the greater masses of people to be served, and the greater complexity and diversity



Professor Liepmann, Director of Music at M.I.T., is seen conducting one of the Institute's musical groups shown on these and following pages.

of the music that is to be performed.

The counterpart to the amateurs' honorable deeds are the many crimes which society has committed against the irreplaceable work of such geniuses as Mozart in Vienna and Bartok in New York.

I think we ought to stop finding everything wonderful the kiddies are doing. I have heard student performances where I wanted to say, "Stop! Let us go to a corner and be alone and weep about our lack of sensitivity, lack of rhythm, lack of style and taste and pitch and musical manners. Hide the fact that you know as little about Beethoven's Eroica as you have just proven to me."

If we were truthful, sometimes we would say: "Isn't it marvelous that they don't smash windows but rather smash Beethoven."

I remember a summer evening in Marlboro, Vt., when I was privileged to make music with Adolf Busch, Rudolf Serkin, and others. We had played Mozart and Bach, and during the festivities concluding the festival it was decided to play waltzes for the friends and trustees to dance to. I would not believe it if I had not been there: someone came up to the Viennese Rudolf Serkin and said, "You ought to play these waltzes slower."

We are inclined to hide behind the convenient alibi that great men are ahead of their times. It seems truer to say that most *audiences* are *behind* their times. Let's not slow down the march of genius, but rather speed up the education and increase the perception of our audiences.

Lately the colleges and universities and the foundations have taken over the role formerly played by kings, dukes, archbishops, and of those musical societies subsidized by a few wealthy individuals.

What can we do to improve our college and civic orchestra activities?

1) We must instill in our players and singers a truly professional attitude: don't show off, don't fake, forget yourself, and serve the cause of music.

2) Our music staff should not try to duplicate the repertoire of the Boston Symphony, but rather dig out the highly worth-while music which lies forgotten, frequently *because* it is less of a showpiece.

We must realize that there is a basic difference between choral and instrumental music. The great Dr. Davison used to say to his Harvard-Radcliffe singers: "Is there a professional singer in this group? Will he or she please leave?" Why did he want to exclude the trained singers





# *'Isn't it marvelous that they don't smash windows but rather smash Beethoven?'*

from his chorus? Because the soloist is trained to stand out and not to blend with a supposedly unanimous group of choristers. Similarly, the tone of a Kreisler would disturb the unity of sound in a second violin section considerably, but you don't find a Kreisler tone in college or civic orchestras. For a well-trained amateur chorus no piece of the literature is impossible to master eventually, while the instrumental repertoire has many pieces which cry out "*noli me tangere*." Ever since Richard Strauss arrived on the scene, we have needed professional musicians who practiced their skill continuously. No amateur orchestra can come near the spirit—let alone the letter—of the orchestral music of the late Nineteenth Century.

On the other hand, whoever has been shown by a sensitive and persuasive conductor how to phrase, how to build a crescendo, how to shade, how to articulate, and how to listen to the others—on pieces which he can manage as an amateur—will then and only then perceive the subtleties of a more complicated piece and a professional performance. If one forever sight reads, races through pieces, and fakes, he dulls his musical perception and does everyone a disservice.

I am not happy when I hear that a college dormitory has performed "Cosi fan Tutte," or a high school orchestra has played Verdi's "Requiem." I believe that these blissfully ignorant undertakings are barbaric and are the opposite of a wise and helpful music education. Fewer concerts, less advertising, more modest programs and a musical diet which is appropriate and healthy for young people would be wiser in our colleges.

With choral music it is a different story: amateur choruses combining with professional orchestras and soloists seem to offer the ideal solution, as we know so well in Boston. The fact that our college glee clubs devote their time to great choral masterworks, rather than to rah-rah shoutings and tricky little ditties, is to the credit of Dr. Davison and his successors. They fought a hard battle—this is often forgotten—against their colleagues, administration, and alumni. The argument they heard was always the same: Let them have fun, don't be so particular, leave the long-hair stuff to the professionals, amateurs will never want to work that hard, this is a glee club, not a choral society, etc.

Today these much-maligned young people with their Beatle hair-

cuts, beards, and bluejeans, practice three times a week for a year the choruses of Bach's "B Minor Mass," Haydn's "Creation," or Brahms' "Requiem" (*one* at a time) and in the spring they visit each other's institutions, rehearse all day, perform for their college community (sometimes quite creditably), have a very short social hour, and drive home in busses. I call that true dedication, not only to the opposite sex, but to the art of music. These people will make better audiences and better musical leaders in their communities.

Young people want to work as hard and continuously in playing and singing music as they work in athletics. But we must show them how to do it and lead them, *not* follow their momentary whim and superficial pleasure. In football it is easy to see what is a successful season—in music it is much harder. There was a prep school headmaster who both knew his music and knew that his students preferred to have everything explained in terms of football. During assembly this headmaster said, "Last night the school played Brahms—Brahms lost." I would like to see more headmasters and college presidents and civic leaders recognize that Brahms might lose.



One usually hears, "But didn't the youngsters have fun?" when as a matter of fact only those who were deaf and dumb had fun. It is a great mistake to think that fun means sloppiness, carelessness, lack of sensitivity, dullness of response. We only have to observe our young people concentrate in sports, in scientific experiments, in Peace Corps activities, in games, and in social services, to see dedication, idealism, skill and joy of living combined in the noblest fashion. It is this sort of fun which we should encourage, not the sadism of a continuous cultural wrecking party.

The key role in our musical life is played by the amateur. With en-

forced leisure time, this role will become increasingly important in years to come. With an improved understanding of the interdependent roles of the professional and the amateur we may produce in future generations of Americans a flood of artistic creation comparable to the greatest cultural peaks in history.



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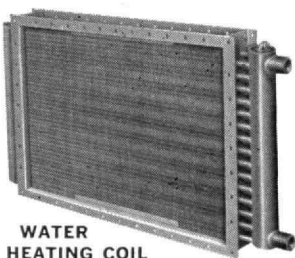


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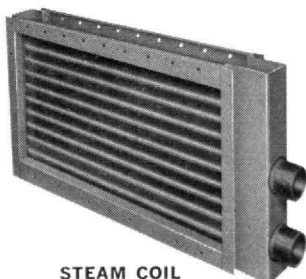
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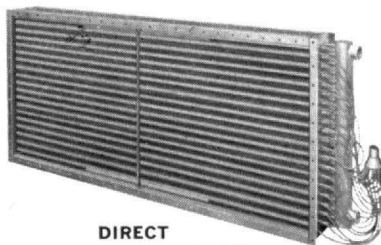
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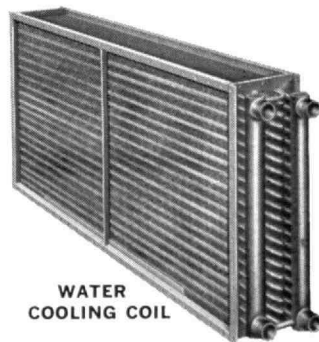
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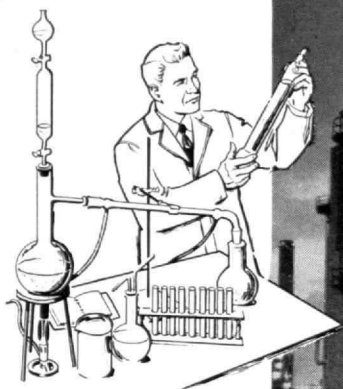
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Alexander Calder's 40-foot stabile *La Grande Voile* (The Big Sail) was dedicated on May 7 in McDermott Court. Present at the dedication ceremonies were Mr. Calder; Mr. and Mrs. Eugene McDermott, who donated the Court, the landscaping, and the sculpture; Mr. and Mrs. Cecil H. Green, '23, donors of the Green Building; and I. M. Pei, '40, architect of both building and court. Beneath the steel sculpture was buried a "time capsule" prepared by M.I.T. Professors Harold E. Edgerton, '27, and Robert R. Shrock.





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*(Continued from page 53)*

## College-University Alliance

Liberal arts colleges in the United States are handicapped in the increasing competition among industry, government, and universities for scientists and science teachers, said James R. Killian, Jr., '26, Chairman of the M.I.T. Corporation, at the M.I.T. Club of Ontario, in Toronto, in May. "I have a growing conviction," he said, "that the solution to this problem will come by collaboration of neighboring institutions in graduate study and research and in the development and use of shared research facilities."

Dr. Killian proposed that schools work toward arrangements whereby groups of institutions would share responsibilities and draw strength from sharing specialized resources. "The great universities, with their extensive graduate schools and research programs, can be of help to the liberal arts colleges; and the liberal arts colleges, in turn, can make important contributions to these institutions, especially in the quality of their undergraduate education," he said.

There are "vigorous changes and renewal at work in education today," said Dr. Killian, but in spite of the awareness of the need for change, "there is still too much that is humdrum and timid."

Dr. Killian said education is faced with a problem of selection: "New knowledge today . . . accelerates obsolescence in the content and methods of many areas of education," and scholars and teachers must work together to "select what is most relevant . . ."

## Special for Parents

On hand for Parents' Weekend, more than 1,300 parents of M.I.T. students attended the April 23 Awards Convocation in Kresge Auditorium. The list of honors included the Karl Taylor Compton Awards for "outstanding contribution in promoting high standards of achievement and good citizenship within the M.I.T. community." Presented by Mrs. Karl Taylor Compton, they went to eight members of the Class of 1966 and to the Student Committee on Educational Policy. The eight seniors were: John B. Adger, Jr.; Daniel T. Allen; William S. Brown; William H. Byrn, Jr.; Charles K. Epps; Donna G. Hayes; Henry H. Perritt, Jr.; and Mrs. Judith Risinger Perrolle.

Everett M. Baker Awards to young professors for excellence in teaching went to Hubert L. Dreyfus and Samuel J. Todes, Assistant Professors of Philosophy, Willard R. Fey, '57, Assistant Professor of Management, and Daniel S. Kemp, Assistant Professor of Chemistry.

The Awards Convocation was just one aspect of M.I.T. life that parents saw during the weekend. They also watched the New England Intercollegiate Sailing Association championship races, met with professors, visited laboratories and classrooms, and attended a production of *Pirates of Penzance* by the M.I.T. Gilbert and Sullivan Society.

## Linguistics Professorship

A bequest from the late Ferrari P. Ward, '26, of Salisbury, Conn., will be used to establish a new chair at M.I.T., the Ferrari P. Ward Professorship of Modern Languages and Linguistics. Noam A. Chomsky, an international authority in the field of linguistics, has been appointed to the professorship.

The new professorship is the first in the Department of Modern Languages and Linguistics, said James R. Killian, '26, Chairman of the M.I.T. Corporation. "M.I.T. has made a strong commitment in the field of the professorship. We are strengthening our program in modern languages, which dates back to the founding of the Institute, and we have substantially expanded our teaching and research in linguistics, a discipline which holds important promise of new insights into the study of language. We are particularly pleased that an endowed chair at the Institute will bear the name of Ferrari P. Ward."

Mr. Ward, a native of Hartford, Conn., was an inventor and industrial consultant and was a trustee of the American School for the Deaf and the Julius Hart Musical Foundation of the University of Hartford. He died on July 5, 1963.

Dr. Chomsky, whose 1957 monograph, "Syntactic Structures," led to recent modifications in English teaching curricula, has done pioneering work on grammatical transformation. He is a graduate of the University of Pennsylvania where he received the Ph.D. degree in 1955. Though his degrees were awarded in linguistics, his graduate work also encompassed studies in analytical philosophy and mathematical logic.

## Poseidon Guidance Contract

The U.S. Navy's Special Projects Office in Washington has awarded contracts totaling more than \$1 million for the development of the guidance system for the new Poseidon missile by the M.I.T. Instrumentation Laboratory, with industrial support from General Electric Company and Raytheon. It is this same M.I.T.-industry team that supplied the guidance system for the Polaris fleet ballistic missile.

The guidance system of the Poseidon, which will be eight times more effective as a deterrent than the most advanced Polaris, consists of two major subassemblies—the inertial platform and the guidance computer with associated electronics. The General Electric Ordnance Department at Pittsfield, Mass., is working with M.I.T. on the inertial platform and on the assembly and test of completed systems. Raytheon's Space and Information Systems Division, Waltham and Sudbury, Mass., is working with M.I.T. on the computer and electronics.

## Off the Cuff

The cuff links worn by M.I.T. Provost Charles H. Townes when he received the Nobel Prize in physics have been given to the Walker Assembly Ball Committee. At the 1966 Ball on April 22 they were worn by William H. Carlisle, Jr., '28, "on account of the great affection the Committee holds for him, its adviser and helper."

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## **T**HE TREND OF AFFAIRS

(Concluded from page 55)

### Computer Social Studies

With the aid of a computer, researchers in M.I.T.'s Department of Political Science are creating a model of a nation's social system that they hope to use as a means of testing the social and political feasibility of economic development plans.

Computers have been used previously to simulate some social situations and processes, but the current project, a joint M.I.T.-Venezuelan effort, is believed to be the first attempt to build a dynamic model of a whole society.

The computers have made it possible for the researchers to work simultaneously with a large number of variables—such as the evaluations and characteristics of key population groups. These are related to each other by a set of "laws" derived from current social theory and survey data. The laws, the researchers say, can be stated as logical propositions and need not be represented by classical mathematical formulas.

The work in progress at M.I.T. is an extension of efforts begun in Caracas, Venezuela, by mathematicians Carlos Domingo and Oscar Varsavsky. They began with a model of a fictitious utopia.

While the utopian model cannot be checked against reality, Professors Frank Bonilla of M.I.T. and Jose A. Silva of the Center for Development Studies in Caracas (at present doing doctoral work at M.I.T.) say that the model has shown great consistency.

"The experiments indicate that the method is feasible and it is sensible to extend it further—that is, to apply it to real societies," Dr. Silva has pointed out. Such an application is in the offing and the study is being used as a base for experimental simulations of the society of Venezuela.

The two projects that are the main source of data for the simulations include a leadership survey called VENELITE—in which some 200 lengthy tape-recorded interviews with Venezuelan leaders have been made, and a study called CONVEN—in which shorter interviews have been held with about 5,600 persons.

### World's Engineers Organize

The world's principal engineering societies are organizing to increase international co-operation. To be known as the International Conference of Engineering Societies (ICES), the new organization will be comprised chiefly of four existing regional engineering federations, namely the Conference of Engineering Societies of Western Europe and the United States (EUSEC), the Federation Europeene d'Associations Nationales d'Ingenieurs (FEANI), the Commonwealth Engineering Conference (CEC), and the Union Panamericana de Asociaciones de Ingenieros (UPADI). The geographical area covered by these organizations includes all of North and South America, most of Western Europe, and parts of Asia and Africa. The confederation was planned at a meeting held this spring at the UNESCO House in Paris.



## Toward the Plural City

(Continued from page 41)

mental units is necessarily a good thing. I mean only this: the multiplicity of governmental structures is not inherently evil, nor is the centralization of governmental authority necessarily redemptive. On balance, I see no great virtue in permitting our mistakes a wider scope. We all are naturally inclined to wish that there were some magic formula, some person possessed of esoteric wisdom to whom we could entrust the solution of our problems. Learned Hand has said it better than anyone I know:

... When I hear so much impatient and irritable complaint, so much readiness to replace what we have by guardians for us all, those supermen, evoked somewhere from the clouds, whom none have seen and none are ready to name, I lapse into a dream, as it were. I see children playing on the grass; their voices are shrill and discordant as children's are; they are restive and quarrelsome; they cannot agree to any common plan; their play annoys them, it goes so poorly. And one says, let us make Jack the master; Jack knows all about it; Jack will tell us what each is to do and we shall all agree. But Jack is like all the rest; Helen is discontented with her part and Henry with his, and soon they fall again into their old state. No, the children must learn to play by themselves; there is no Jack the master. And in the end, slowly and with infinite disappointment they do learn a little; they learn to forbear, to reckon with another, accept a little where they wanted much, to live and let live, to yield when they must yield; perhaps, we may hope, not to take all they can. But the condition is that they shall be willing at least to listen to one another, to get the habit of pooling their wishes. Somehow or other they must do this, if the play is to go on; maybe it will not, but there is no Jack, in or out of the box, who can come to straighten the game.

The meaningful correlate of social pluralism is a kind of political pluralism, in which there is some significant way in which the communities we seek to build within the city can have political power over their own destiny. I know the dangers. Even now, we turn our communal backs on one another and save for rare exceptions, we do not take our neighbors' problems as our own. In Boston we are witness to one of the exceptions, in the form of Metco, a plan whereby several of our suburbs will accept into their schools children from the Boston system. But the numbers are necessarily few, and most of the suburbs are reluctant to participate, and even with the best of will it is quite clear that the upper limit on such a plan is the suburban reading of Gresham's Law: When the poor student starts to affect the good student, we shall have seen the end of the plan.

There are other ways of approaching these problems, and in particular the problem of the schools, the ultimate thorn in the side of true metropolitanism. Christopher Jencks argues most provocatively that the public school is obsolete, that we would likely do a better job all

(Concluded on page 58)

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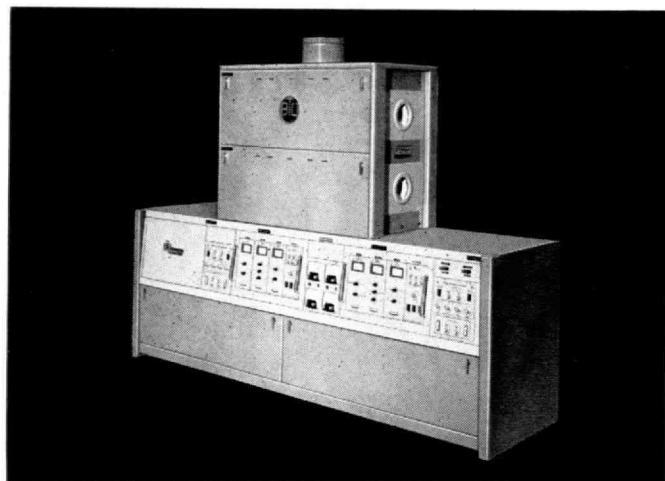
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## Toward the Plural City

*(Concluded from page 57)*

around if we were to turn our schools over to private control. His argument makes a hard case. For myself, I think the public school is still viable, but I would want to see tomorrow's schools match tomorrow's cities.

If we set about creating reasonably homogeneous nuclei, for example, I fear the segregated schools—segregated not only by race—that will result. For reasons both educational and social, I should want our schools to straddle the corridors connecting the nuclei, drawing their students from diverse centers. That means that school districts ought not correspond with community boundaries. Insofar as there is a correspondence and insofar as communities are homogeneous, then we reinforce the insularity that is the danger of community. At the same time, if we separate the two, we create a new order of problem, affecting such matters as tax rates and social policy. The problem is not insuperable, however, for there is no intrinsic reason why schools cannot be managed on an inter-communal—that is, a regional—basis.

In the larger context, I can think of no reason why we might not adopt the federal model at the metropolitan level. We recognize that it would be folly for each state to have the right to declare war, or for this nation to field 50 separate armies when we go to war; we would find unreasonable a state's desire to launch a space program of its own. Similarly, there are matters, such as highway planning, and perhaps over-all educational policy as well, which might best be conducted by regional authorities. But there are other matters still where sub-committees within the larger community of the metropolis may have their way, without impinging on the rest of us. The design of our parks, the allocation of public spaces, the laws which govern public behavior—all these, and more, might well be determined at the very local level. My plea, then, is for a politics of scale. Again, there is danger here. But there is also promise, the promise of an increased relatedness between the person and the polity, the promise of increased identity between the person and the citizen.

► So, finally, to pluralism in the planning process itself. I want no master plan, for any master plan must violate the self-discovered formulae of the limited community. I know, of course, that to rely on a freer market for planning than most of us envision is to invite disorder; it is undoubtedly inefficient, and will multiply the number of mistakes—although, not their scope; it will result in much that is tawdry and trivial, in much that is base and repressive. I have no great faith that people will learn to choose wisely, or even that they will welcome the opportunity to choose. But I have still less faith in any monolithic vision of the future metropolis, in any comprehensive scheme. The best such scheme can never duplicate the infinite variety which nature herself provides, for better and for worse, and which is, when all is done, what the city is about.

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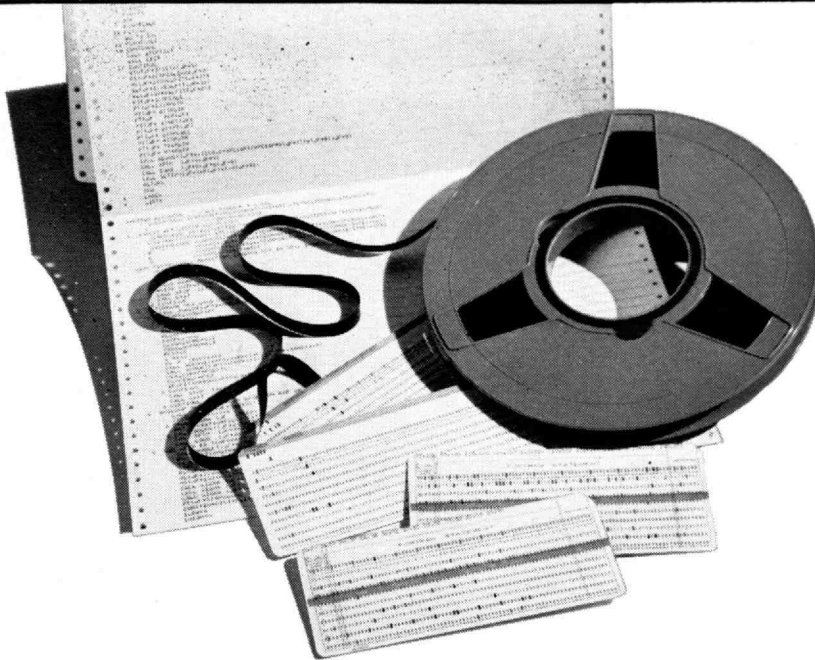
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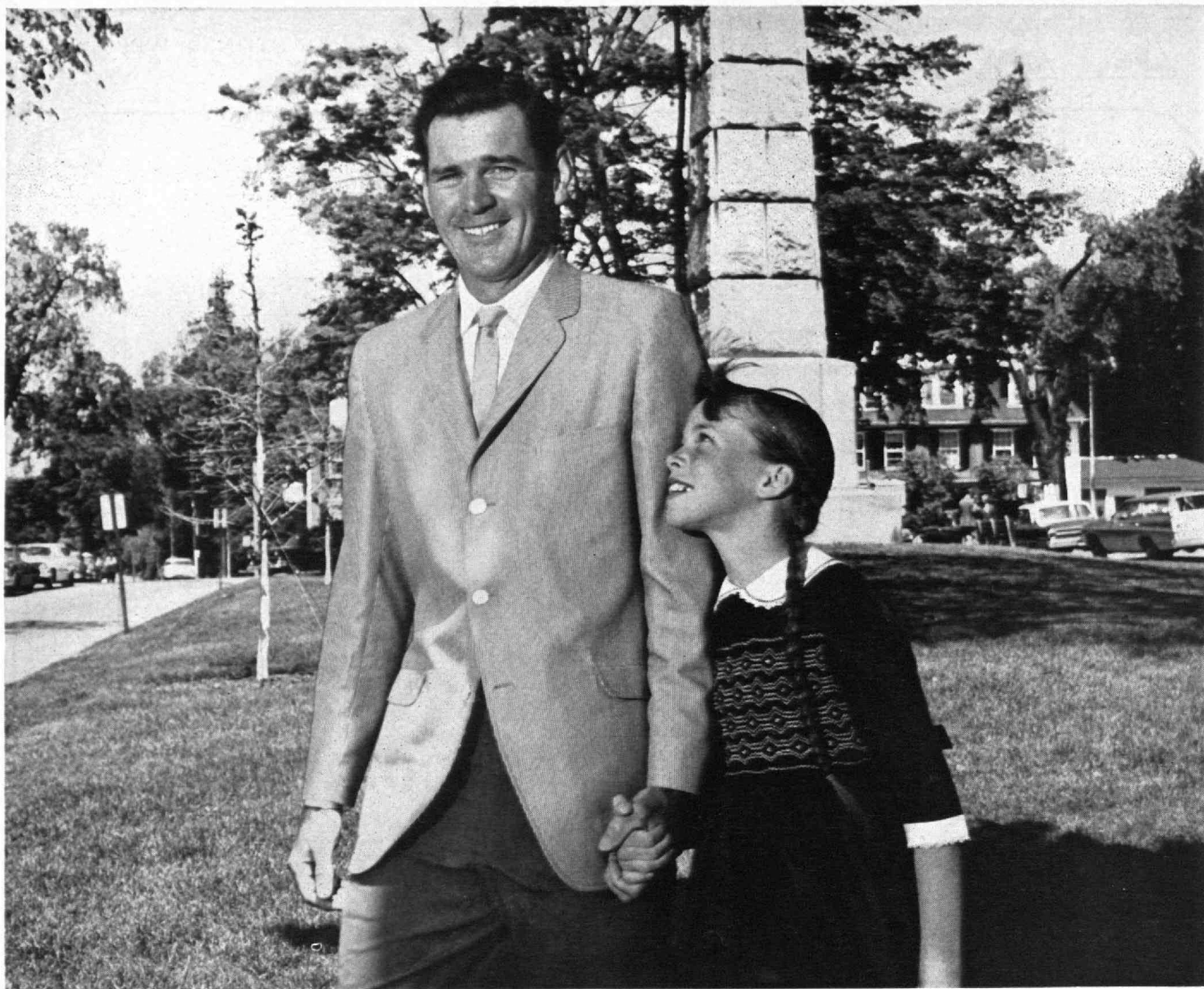


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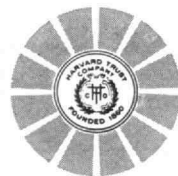




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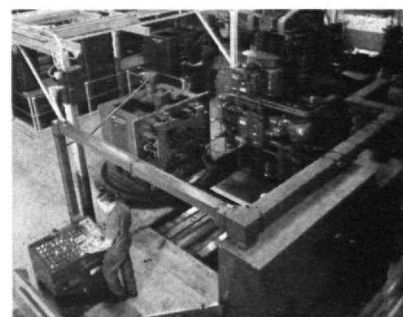
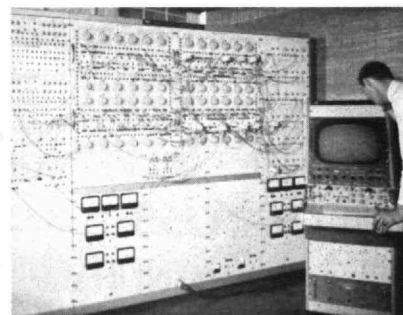
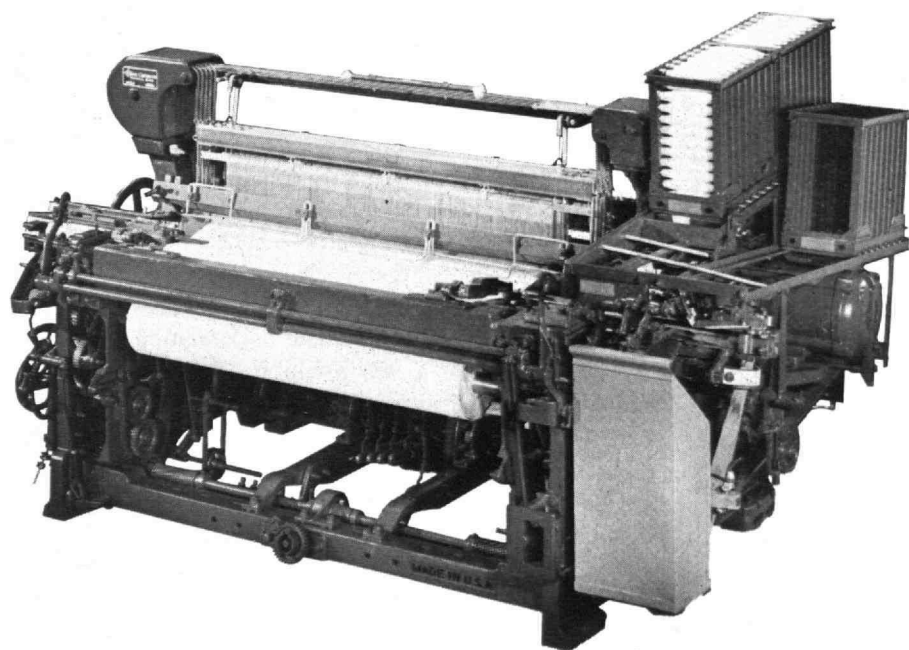
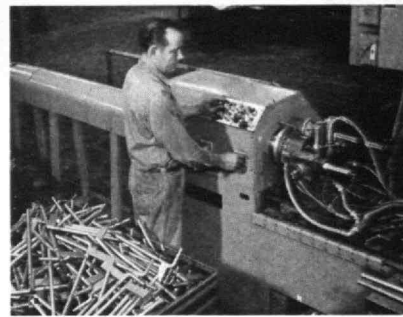
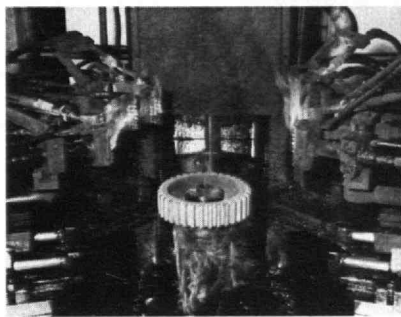
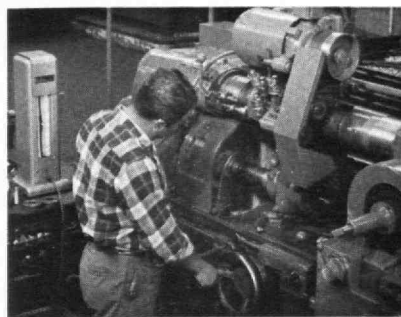
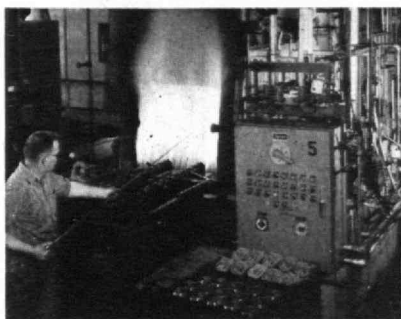
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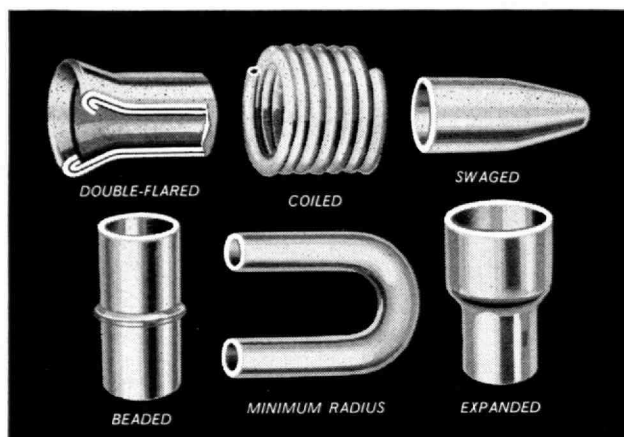
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## NOTABLE NEW BOOKS

**THIRTY YEARS THAT SHOOK PHYSICS: The Story of Quantum Theory**, by George Gamow. Illustrations by the author. (Anchor Books, Doubleday & Co., Garden City, New York. Science Study Series, 1966. \$1.45.)

Reviewed by Philip Morrison, Professor of Physics, M.I.T.

A slender and dashing Edward Teller poised on skis, to your right; Lev Landau, the master of a generation of Soviet physics, six feet to the left; and in between, George Gamow, bent far over the handlebars of his motorcycle: They look at you from one of the dozen period photos which appear in this latest Gamow paperback. A couple of dozen sketches from Professor Gamow's own pen, always agreeable (and often even recognizable) portraits of the great faces, sum up the pictures in this irresistible buy.

But it is not at all a picture book. In the familiar witty and cheerful Gamow prose, its eight short chapters tell the history of the quantum theory, through Rayleigh-Jeans, Planck, and Rutherford, to Bohr's atom, to Pauli, de Broglie, and Heisenberg, and on to Dirac, Fermi, and Yukawa. The illuminating metaphors which Professor Gamow so often ignites to help the slightly initiate grasp the ideas of theoretical physics are well represented. Everyone will admire the infinite piano keyboard of Rayleigh and Jeans, will delight in the notion that an  $\text{Li}^7$  recoil track from a  $\text{Be}^7$  K-capture is like the London constable kicked in the pants by Wells's *Invisible Man*, and will profit from a convincing example of short-range forces—Scotch tape!

All this is only the very attractive wrapper. Like *Batman* (or better) concealed in the pages of the calculus book is the rich store of anecdote about the personalities of the remarkable set of young men who made the quantum theory. The years of that triumph—possibly the most sustained outpouring of human imagination since the Seventeenth Century—were from 1925 to about 1933, and its centers were Göttingen, Cambridge (not Mass.), and Copenhagen. Gamow, a new Lenin-grad graduate, came to Göttingen in 1928, "struck a gold mine" in the explanation of radioactivity, and went on to Bohr's Institute at 15 Blegdamsvej. He was there, and this is how it was.

All of the folklore of the great is here: Dirac introducing his new wife as "Wigner's sister"; the Pauli effect, by which that famed theorist could break down experimental apparatus, not only by visiting the lab, but even by passing through Göttingen on a train; and Bohr's strong preference for the Hollywood Western,

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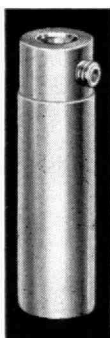
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which he never quite understood. (I once took Professor Bohr to a John Wayne film and gave him a running commentary on its intricate pastoral conventions!) Gamow and Bohr "shot it out" with toy guns once to test his psychological theory of the fast draw. Bohr "killed" every student. Here too is a fantastic unpublished conjecture (dead wrong) Bohr once made about stellar energy. Here is the sour comment made about de Broglie's really strange—but correct—pioneer doctoral thesis, which the wise guys called the *Comédie Française!* Here is even the tie painted with a picture of a beer bottle, real Carlsberg camp.

If these were not enough, the capstone is a brilliant translation (by Mrs. Gamow) of an anonymous German masterpiece of 1932, the Blegdamsvej *Faust*. This hilarious and ingenious work, in proper parody-meter, does both Parts I and II of *Faust*, with Bohr as The Lord; Pauli, Mephisto; Ehrenfest, Faust; and Dirac and others as themselves. The final couplet is "Eternal Neutrality pulls us along"—for this play's Gretchen is the lovely and mysterious neutrino. While the notes help, to understand the allusions throughout is a fair start towards the physics Generals. It is appropriate to observe that three distinguished present members of the M.I.T. Physics Department appear, while one charming and talented M.I.T. faculty wife has assured me that she *danced* the *première* of the important and subtle if silent part, *The Spin of the Photon!*

Buy the book if you want to think yourself a quantum physicist! It is a sharp look into a history of ideas as glad and gallant as any we know.

## Books on Urban Problems

Readers interested in the problems of cities may explore them further in these three new volumes from The M.I.T. Press.

*Man's Struggle for Shelter in an Urbanizing World*, by Charles Abrams (The M.I.T. Press, \$2.45, paperback). The problems of industrialization and population explosion in the developing countries is discussed.

*Toward New Towns for America*, by Clarence S. Stein; introduction by Lewis Mumford (The M.I.T. Press, \$2.95, paperback). Mr. Stein's document of the housing and planning experiments in this country.

*Urban Migration and Economic Development in Chile*, by Bruce H. Herrick, '64 (The M.I.T. Press, \$5). A study of the years 1940-1960.

(New Books are continued on next page)

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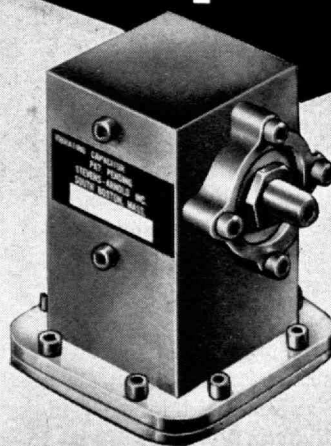
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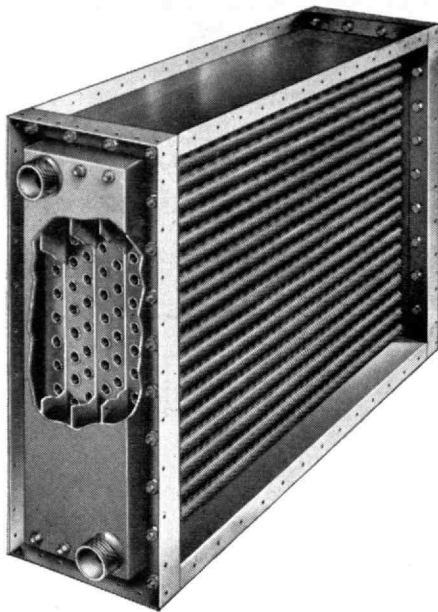
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NOTABLE NEW BOOKS

(Continued from page 63)

**MANPOWER AND EDUCATION**, by Frederick Harbison and Charles A. Myers (*McGraw-Hill Book Company*, \$9).

Reviewed by **B. Alden Thresher**, '20, M.I.T. Director of Admissions, Emeritus.

"How to Start from Scratch" would be a good title for this collection of essays. It will serve as an eye opener for home-keeping Americans who may be inclined to take for granted the advantages of living in an advanced economy. We hear much about the shortcomings of our system of education. Yet even with all its faults, it is, after all, *there*. It is hard for us to imagine a situation in which such a system for the most part simply does not exist. This book exhibits just such situations on three continents.

In these monographs, varied in style and content, 11 authors put under scrutiny a series of societies most of which are still in the early stages of planning and initiating educational systems to cope with their most urgent needs for high-level manpower. These and other similar studies provided much of the raw data for Harbison and Myers' earlier comparison of 75 countries (see *Technology Review*, July, 1964, p. 54). A plaintive keynote is sounded for all the studies by George B. Baldwin, '52, author of one of the best essays in the collection: "In Iran, as in many countries, it is extremely difficult to get anything done, to move ahead, to translate a good idea into even a middling project."

Just as the economics of developing countries has come to the fore as a major contemporary aspect of political economy in the old-fashioned, broad sense of the term, so the education-manpower coupling has come to appear more and more as the heart and kernel of the development process itself. "Manpower" is a kind of shorthand term, a transition concept useful in adjusting education, through the operation of political and market forces, to the needs of the economy that it serves and to the culture that it ultimately shapes. As these come gradually into some adjustment, "manpower problems" deal less with situations of universal scarcity and more with systems of incentives and mechanisms of labor allocation. These are the permanent manpower adjustment devices that will always be needed. Education remains the heart and center of the development process. Perhaps a more precise metaphor would regard education as the society's cellular nucleus within which the genetic code for economic growth and cultural development is imprinted.

The process of multiplication from this template is exceedingly complex. As the authors put it: "Investments in education certainly contribute to economic growth, but it is also obvious that economic growth makes it possible for nations to invest in educational develop-

ment. Education therefore is both the seed and the flower of economic development. As we demonstrated in *Education, Manpower and Economic Growth*, there is a close association between enrollment ratios at all levels of education and GNP per capita. But other factors are also associated with economic growth. The availability of mineral wealth, world markets for particular commodities, the population land ratio, the stability of political institutions, social and cultural traditions and many other factors are influential. Thus, for any single country it is naïve to assume that an investment of  $X$  dollars on education will account for an increase in national income of  $Y$  dollars."

Two themes recur in many of these studies. The first is the massive drag of cultural and social habits in societies barely emerging from the "traditional" stage. Customs rooted in conditions of a low-productivity, pastoral or agricultural economy served, in their time, an indispensable purpose. They told people what to do in most situations. For an unlettered populace, they were a substitute alike for expert supervision and for tyranny, and so were often a preventive of oppression. Economic development implies high-productivity methods, empirical and rational.

The opportunities for collision between old and new habits of thought are endless. These concern not only techniques of production, but customs of social organization as well. What we condemn as nepotism stems from essential functions of collective responsibility in feudal or familial systems. The responsibility of a father to look after his sons and nephews may ill accord with the business ethos of competitive enterprise, professional management, and job-seeking in an industrial society.

The second theme is the extent to which higher education itself is permeated by vested interests in the *status quo*. It is a familiar social phenomenon that remote or provincial societies, whether colonial or not, tend to freeze into the mold of the mother or pattern society as of some initial date when the influence of that center was dominant. So we find in Iran that education based on nineteenth-century French models is now being rapidly abandoned. In particular the University of Teheran reproduces the nineteenth-century French university with all its faults. Separate, largely autonomous faculties have little contact and hence there is much duplication of facilities; instruction is didactic, rote-memory style; the faculty is mostly part time; there is no central library; there is little faculty-student contact; classes are scheduled in the morning to free professors for outside jobs which are often their main interest; little research is carried on. "Scattered examples of adaptability are exceptions to a deeply rooted pattern of conservatism maintained through the tight control over University affairs exercised by the University senate" made up of senior professors. In some such situations, resistance to change has made it seem easier to start afresh by founding new universities, rather than trying to counter the immovable weight of conservatism within an institution.

(Concluded on page 66)

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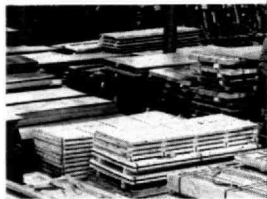
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(Concluded from page 65)

Baldwin emphasizes the extremely loose "gearing" between input into education at one end of the system, and output of manpower ready for specific occupations at the other. Estimates of demand can contribute only broad scaling factors in estimating supply. Important

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also is the nonmeasurable character of certain highly valuable skills. These are essential factors for an "achieving society."

Furthermore, estimates of the *amount* of education required for specific jobs and occupations are arbitrary and highly variable. We are all familiar with the worker with less than the conventional degree of formal training who nevertheless performs admirably, and the converse case of the one who has gone through all the motions and earned all the degrees, but still is only second-rate.

Other papers in the book follow different plans in looking at countries of Africa, Asia, and Latin America. Guy Hunter, for example, sketches contrasts between East Africa and Southeast Asia and in the latter group of countries, specifically, differences between Burma and Indonesia on the one hand, and Thailand and the Philippines on the other. The volume as a whole is a beautiful exercise in what might be called differentiated generalization. One must look closely at a developing society, both to pick up parallels with others and to discover surprising contrasts that quickly invalidate any too facile generalizations. Pervading the volume we find the indispensable tone of firsthand case study in realistic detail. The reader gets the feeling he has been there, and that the experience has deepened his understanding.

## Books You Should Know About

*The Architecture of America, A Social and Cultural History*, by John Burchard, '23, and Albert Bush-Brown (Atlantic-Little, Brown, \$3.95). A story of the evolution of a uniquely American architecture from derivative European forms.

*The Architecture of H. H. Richardson and His Times*, by Henry-Russell Hitchcock (The M.I.T. Press, \$3.95, paperback). A study of Richardson's architecture and the setting in which he worked.

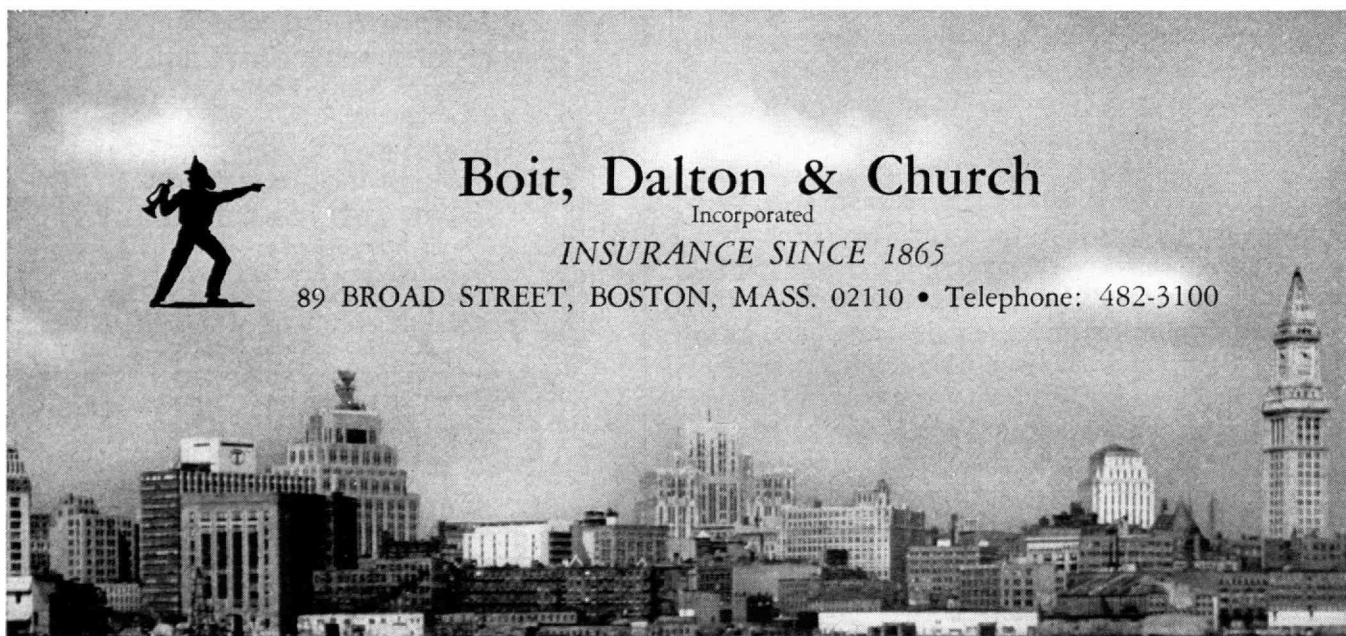


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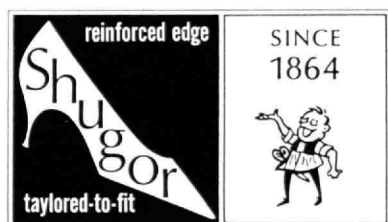
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## Heads Department

Alfred H. Keil has been appointed professor and head of the M.I.T. Department of Naval Architecture and Marine Engineering, effective July 1. Since 1945, Dr. Keil has been associated with the United States Navy, most recently as Technical Director of the David Taylor Model Basin in Washington, D.C.

Institute Professor, Emeritus, C. Richard Soderberg, '20, has been serving as acting head of the Department since February, 1965, when H. Guyford Stever resigned to become president of the Carnegie Institute of Technology.

Dr. Keil, a native of Germany, received the doctor of natural science degree from Friedrich Wilhelm University in 1939. He was a research associate for the German Navy during the war, and worked for the U.S. Naval Technical Mis-



PROFESSOR KEIL

sion in Germany in 1945-1946. In 1947 he came to the United States to work on the Underwater Explosion Research Program of the Bureau of Ships. As Chief Scientist of the Underwater Explosion Research Division in Portsmouth, Va., he be-

came the recognized authority in the United States on the physics of underwater explosions and their effect upon ship structures.

In 1959 Dr. Keil became technical director of the Structural Mechanics Laboratory at the David Taylor Model Basin. Under his leadership, work on ship protection was expanded and the Underwater Explosion Research Division was integrated into the Structural Mechanics Laboratory. He also played a leading role in the development of the structures of U.S. submarines for greater depth.

He was appointed as the first technical director of the David Taylor Model Basin in 1963, and since then has been responsible for the planning and direction of the research and development program of the organization. Specific projects initiated under Dr. Keil's direction include formation of a ship acoustic and vibration laboratory, a study on high-speed ships that identified the potential of large air-cushion vehicles, and formation of a computer-aided design division.

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## Community Relations Post

Gordon L. Brigham, '63, has been appointed assistant planning officer for community relations at M.I.T. He will co-ordinate the use of the Institute's technical and professional resources in support of other agencies and organizations concerned with housing and redevelopment in Cambridge. In the event the inner belt is constructed through Cambridge, he will work with these agencies in meeting problems of relocation.

During the last three years Mr. Brigham was an associate planner with the Cambridge consulting firm of Adams, Howard & Oppermann, where he had responsibility for preparing comprehensive plans for two Boston-area communities, Andover and Lincoln. He has also had a major part in developing a new zoning ordinance in Providence, R.I., and has been a member of planning departments of Saratoga County, N.Y., and Rock Island, Ill.

Mr. Brigham has a B.A. degree in architecture from Yale University and attended M.I.T. for three years



GORDON L. BRIGHAM, '63

under a Sears City Planning Fellowship, earning his master's degree in 1963. During his final year at M.I.T. he received the American Institute of Planners Award in recognition of outstanding academic achievement.

## Professor Appointed

Hamish Nisbet Munro of the University of Glasgow has been appointed general foods professor of physiological chemistry in the Department of Nutrition and Food Science. The General Foods Professorship is supported by funds from the General Foods Corporation.

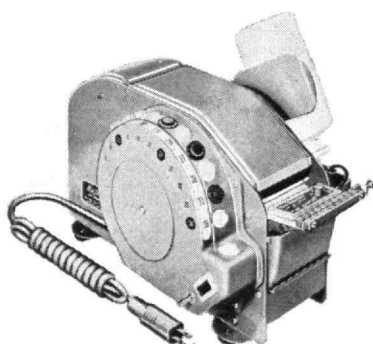
Dr. Munro is a world authority on mammalian protein metabolism and the principal author of a recent two-volume treatise on the subject. He has also written a British textbook on biochemistry for students of medicine and science.

Dr. Munro is a member of the advisory panel on nutrition of the World Health Organization and of the Food and Agriculture Organization, and a frequent international consultant in the fields of protein requirements and the effects of trauma, disease, and other sources of stress on protein metabolism.

He received both his medical and doctor of science degrees from the University of Glasgow and is a Fellow of the Royal Society of Edinburgh.

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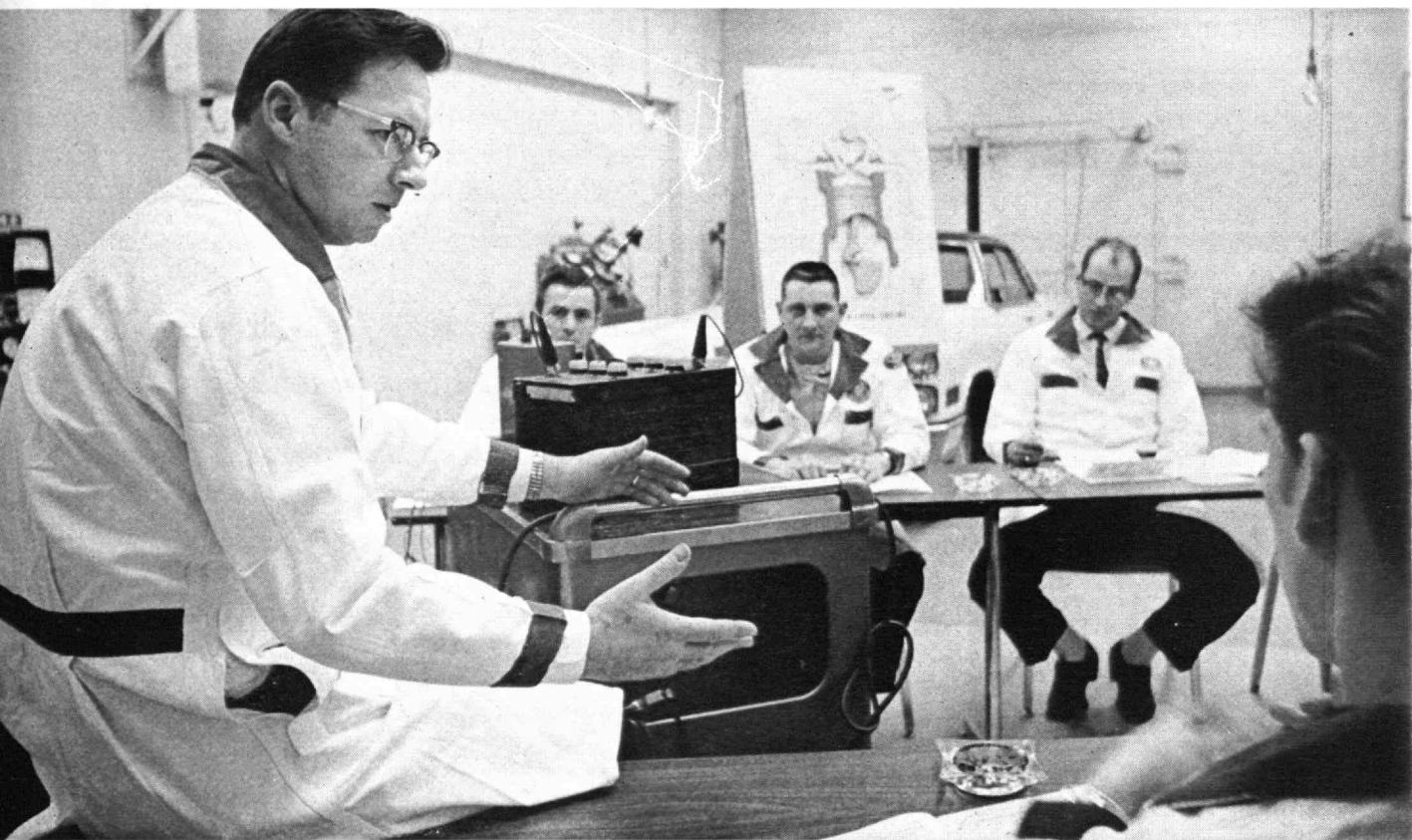
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After serving as a helicopter mechanic during the war, Art joined one of the General Motors car divisions as a mechanic and soon worked his way up to Master Mechanic. Today, Arthur E. Mayer, Jr., is an instructor at one of 30 GM Training Centers across the nation, with a total annual enrollment of some 125,000 automotive mechanics drawn

from GM retail dealerships. The "refresher" courses taught at these centers keep local dealer mechanics constantly abreast of new advances in technology and service methods.

Art Mayer is happy working with his students, helping to advance their knowledge and skills. He's a fine example of the kind of people that make GM go.



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# Class News



## '95

Our annual meeting will be held as usual with the M.I.T. June 13 Class Day events under the tents on the Charles River front.—**Andrew D. Fuller**, Secretary, 1284 Beacon St., Brookline, Mass.

## '96

While **Walter Leland** was in the hospital for a minor ailment, just before Christmas, he suffered a stroke. In an April letter he writes, "My health in general is good and the doctor feels very encouraged. I may even make the additional 10 years I have planned for. Frankly I am feeling very well indeed." We all trust that his plan will be adopted and include the 80th meeting of the class.—**James M. Driscoll**, Secretary, 129 Walnut St., Brookline, Mass.

## '01

I have to report this month the death of **Leonard Chandler** who has been a faithful member of the class for many years. His business was in industrial heating and plumbing. He was first associated with the Walworth company and then with Rideout, Chandler and Joyce. He was connected with the Abington savings bank for 50 years and was president for the past 15 years. He retired in December 1964. His chief interests were in boating, hunting and fishing, activities in which he participated well into his 80s. He is survived by two daughters and a brother. . . . I have no further news from Mrs. Peterson.—**Theodore H. Taft**, Secretary, P.O. Box 124, Jaffrey, N. H. 03452

## '02

**Raymond J. Mayo, IV**, died February 9, 1966, in Wilmington, Mass., where he had resided since 1956. His active professional career centered in the Portland, Maine, area and the following is from the Portland Express: "Wilmington, Mass. Raymond J. Mayo, 88, retired member of an architectural firm which designed several public buildings in Maine died here Wednesday. Mr. Mayo was born in Salem in 1878. He attended the University of Maine and the Massachusetts Institute of Technology. He was a retired member of the firm of Miller, Mayo and Beal. The company designed Portland and Cheverus

High Schools, the Longfellow School, and the Central Fire Station, all in Portland, Maine. Also among buildings designed by the firm were the Lewiston, Maine Armory and the Woodfords Congregational Parish House, Portland, considered to be among the finest examples of New England architecture. Mr. Mayo's wife, the former Edith Gray, died in 1956. He leaves a son, Philip Mayo."

We have lost another Maine classmate in the death of our "Robbie," **J. Albert Robinson**, on March 29, in Brunswick, Maine. Word of his death was received in a note from his wife. Robinson was a native of Canton, Mass., born on January 8, 1880; and he prepared for M.I.T. at the Canton High School. Before hitting upon the line of work which he was to make his life calling Robbie tried life on a cattle and fruit ranch in Cuba, a brief stay with the lead and zinc mining industry in Joplin, Mo., and in the spring of 1905 made a trip to New Mexico to investigate and report on a gold and copper mining proposition. He then started his career as fire protection engineer and the next dozen years was engaged in fire protection engineering and rate making with the Underwriters Bureau of New England and New England Insurance Exchange, both in Boston, including two years as assistant editor with the National Fire Protection Association. Then a year was spent in Washington, D.C., as special agent for safety and hygiene with the Federal Board for Vocational Education. From the fall of 1919 to the fall of 1923 he was superintendent of Inspection with the Grinnell Company in Providence, R.I. He then went to Hartford, Conn., as special risk underwriter and service engineer with the National Fire Insurance Company. In April 1929 he became insurance manager for McKesson & Robbins, Inc., the large drug company. In 1941 he was made assistant vice-president. He was retired in 1948 under their retirement plan. During his 19 years employment with McKesson & Robbins he had been prominently identified with the activities of the insurance division of the American Management Association and the Risk Research Institute, Inc., and was for many years chairman of the insurance committee of the National Druggists' Association.

For the retirement years the Robinsons chose Brunswick, Maine, the home town of Mrs. Robinson. As the seat of Bowdoin College the town offered a pleasant and active community atmosphere and Robbie once said that his retired years were the happiest of his life. He became one of the community readily. As a qualified appraiser for the loan Guaranty Division, Appraisal Section, Veterans Administration, he received occasional assignments in the immediate vicinity which helped to give him an interesting occupation. He was received into the Rotary

## Happy Birthday

In June two alumni will reach the age of 95 and two will become 90; eight will celebrate their 85th birthday; eight will attain their 80th mark.

June, 1871—**HARRY M. LATHAM**, '93, on the 2nd; **FRED C. BAKER**, '94, on the 15th.

June, 1876—**ALBERTO P. GONZALEZ**, '01, on the 10th; **FREDERICK A. HUNNEWELL**, '97, on the 12th.

June, 1881—**HERBERT M. MORLEY**, '03, on the 1st; **A. WARREN WELLS**, '05, on the 3rd; **GEORGE T. PARASCHOS**, '02, on the 11th; **GEORGE A. CURTIS**, '04, and **JOHN V. RATHBONE**, '04, on the 17th; **HOWARD S. MORSE**, '03, on the 21st; **EMMET DWYER**, '05, and **ELLSWORTH SPERRY**, '06, on the 30th.

June, 1886—**HERBERT J. WERTHEIM**, '09, on the 3rd; **WALTER H. BYRON**, '08, on the 10th; **FREDERICK A. DOWNEY**, '10, on the 12th; **JOSEPH POPE**, '08, on the 20th; **LOUIS E. MONGE**, '11, on the 21st; **MAURICE E. ALLEN**, '08, on the 22nd; **J. ELLIS DOUCETTE**, '07, on the 26th; **LOUIS SVARZ**, '09, on the 27th.

Club, classified as a Real Estate Appraiser, and greatly enjoyed his membership. For some years he was editor of the club's weekly bulletin. He was also a member of the Town and College Club and from 1954 to the time of his death was president of the Brunswick Old Folks Association (Stevens Home). He was always active in the affairs of his church. He was a licensed Universalist layman, was president of the Connecticut Universalist Convention for five years, former treasurer of the Universalist Church of America. Fraternally he was a 32nd degree Mason and a life member of the Aleppo Temple, Mystic Shrine. Surviving are his widow, Mrs. Grace Crawford Robinson; a sister, Miss M. Isabel Robinson of Brunswick, and several cousins.—**Burton G. Philbrick**, Secretary, 18 Ocean Ave., Salem, Mass. 01970

## '03

Well Classmates, when we assemble on Alumni Day, June 13, to celebrate the M.I.T. half century in Cambridge, Mass., our thoughts are prone to linger in sombre memory of our unpretentious but revered sanctum of M.I.T. in Boston during 1900-03. Your Secretary revisited our former rendezvous of Berkeley and Clarendon Streets recently only to find a gigantic business structure occupying its location. To visualize the former neighborhood as such, for our Rogers and Walker were then encircled by pretentious brick mansions, the homes of business proprietors, who could readily commute from their upper Boston establishments and enjoy their deserved solitude after a busy day's routine. In retrospect, I could happily remember our classmates daily poised in relaxation atop the large flat granite rail on the crest of Rogers front steps. Their look rested on the imposing building, corner of Boylston and Berkeley Streets opposite,



known as the prominent Y.M.C.A. Here strangers were freely welcomed to its parlors, library, reading and game rooms and lectures were provided that we non-members often attended. At the corner of Clarendon and Boylston Streets opposite the Walker Building was Boston's most sumptuous Brunswick Hotel. Here it once had as guests Presidents Arthur, Grant, and Hayes, also Mrs. Jack Gardiner, whose later domicile was her renowned Museum in the Fenway. In sharp contrast, however, occupying the space between these two structures, was a long row of austere brick mansions where dwelt Boston's elite.

In conclusion, as the entire present scene is one of noisy business structures and their atmosphere, I found solace in the constantly quiet quarters of our former M.I.T. library, that occupied the entire rear of Rogers Main Hall, with outlook on Newbury Street, then an entirely residential street. Here we students sat with studious mien, in a chair of that period—within each long alcove that held high stacks of books—and avoided the nervous gaze of Proxy Tyler, librarian in charge. How unlike present M.I.T.'s multitudinous library branches, each department having its own library yet coordinating with the main library.

In conclusion, for all older M.I.T. Alumni that claim the distinction of their college period within its modest original setting in Boston, we cannot adjust ourselves to present extensive conditions in Cambridge. Though supremely impressed with the present grandeur and modern excellence of our M.I.T. buildings and their laboratories, yet we treasure the memories of Rogers, Walker and Engineering Buildings, amidst their quaint halls and classrooms and affectionate associations with our many aged professors.

The Ford Foundation has made a grant of \$8,000,000 to M.I.T. to strengthen and expand the Institute's educational and research activities in international fields. Dr. Charles H. Townes, M.I.T. Provost, says that the grant will provide new strength for a broad range of internationally oriented programs throughout the Institute. The grant includes \$4,500,000 to be used over a five-year period for a variety of activities for teaching and research of prime importance to international affairs. These activities encompass interests ranging from civil engineering to political science, the oldest and the newest departments at M.I.T. The total scope of the program is perhaps best indicated, Dr. Townes stated, by the fact that this grant will be administered by a new M.I.T. Committee for International Affairs which will include the Deans of the five academic schools at M.I.T. Besides this program support, the Ford grant will also provide \$3,500,000 to endow seven new professorships. These chairs will be filled, Dr. Townes said, by outstanding scholars whose interests emphasize the international aspects of such areas as political science, economics, contemporary history, management, and urban planning.

Mrs. Eleanor Jack, 90, widow of Professor James R. Jack, who developed the first department of Naval Architecture in this country at M.I.T. in 1919, died March

6 at Dundee, Scotland. Mrs. Jack was active in M.I.T. affairs for over 45 years. She was a founder and life-long advisor of Technology Dames, the M.I.T. student wives organization.

A history professor at M.I.T. has been appointed to the newly-created position of Archivist. He is Professor E. Neal Hartley, a specialist in the study of the impact of science and technology on modern society. The appointment was made in line with the Institute's plans to expand its archives.

Our birthday greetings for their 85th go to **Clarence M. Joyce, V**, on April 1, **John J. A. Nolan, V**, on April 3, and **George E. Kershaw, XIII**, on April 4.—**John J. A. Nolan**, Secretary, 13 Linden Avenue, Somerville, Mass.; **Augustus H. Eustis**, Treasurer, 13 State Street, Boston, Mass.

## '04

Some good news this month—the newspaper strike is finally over and after 33 days the presses have started to roll. It has been an experience we do not wish to see repeated for a long while.

As usual we have the sad duty of reporting the passing of three of our classmates: **Ben C. Moores** of Seattle, Wash., and **Charles F. Hunter** of Elkhart, Ind. The Washington Post of April 2, 1966 reported the death of **Henry L. Lyman** who received his degree in civil engineering. He settled in Boise, Idaho, in 1906 working on irrigation projects for the Interior Department's Reclamation Service. In 1915 he designed what was at the time the world's highest dam. In 1917 he moved to Washington, where he worked as an engineer in the office of the Supervising Architect of the Treasury Department. There he designed Government buildings. After attending the National University Law School at night he was admitted to the D.C. Bar in 1922. In 1939 he set up racially integrated quiz courses for law school graduates preparing for their bar exams. He continued this work for five years. In 1942 he retired from Government service and set up a law practice in which he was active until last January. He indulged in a life-long love of Hebrew studies until his death.

No reports from our traveling classmates have been received to date but perhaps they will come later.—**Eugene H. Russell, Jr.**, Treasurer, 82 Stevens Rd., Needham, Mass.

## '06

As of mid-April the reunion letter-questionnaire has not been mailed to you by the Alumni Office but should have been received long before you read this, and your replies long since sent to me. Seven couples are definitely attending our Sixtieth Reunion: the Chases, Coeys, Rowes, Taylors, Hoefers, Fogg and Fletchers, with three not heard from as yet but hopefully expected: Burpees, Gibbons and possibly Bents. Six singles and a guest

are definite: Guy Ruggles and his sister Helen, Abbott, Davol, Rose, Kerr and Art Sherman. Hopefully expected are Farwell, Kendall, Guernsey and Ware, possibly Jim Wick. Definite room reservations were made early in April for 10 couples and nine singles (possibly four more) at the Charter House Hotel on Cambridge Parkway, quite near the Campus and overlooking the Charles River Basin, across the Boston Skyline—a brilliant scene at night, with the Prudential Tower in the distance.

Arriving on Sunday June 12, or Saturday, you will check in at the Charter House and after getting settled and "circulating," we go to the Campus to attend the reception at the new Student Center (named for President Stratton) to honor Dr. Killian and President-elect Howard Johnson, from 6 to 7 o'clock. Through the cooperation of the Alumni Secretary, Fred Lehmann, our class will have a private room there for the Dutch Treat Dinner which follows the reception, and have our class meeting too. The next morning those who desire may have breakfast "on the house" at Walker Memorial (7:30 to 9:00) or try one of the several restaurants in Charter House, before getting our Alumni Day badges and tickets. After attending the morning seminars and meetings—some will—we can meet on the steps of Building 250, under the big dome, or at our lunch table, for the eats, President Stratton's talk, and the presentation of the thousands, or millions, gifts of the 40 and 50 year classes. Some of us will take in one or more of the afternoon talks and probably most of us the cocktail hour and banquet before the Kresge program. Tuesday comes the lunch and "sail" on **Joe Santry's** Pleione II out of Marblehead. Somebody has asked "What should one wear on such a cruise?" The only suggestion I would make is to have a sweater or rain coat along and wear rubber sole shoes, or for the gals, no spike heels! After the return to terra firma, Joe will get us back to the Charter House to go our separate ways, and our Sixtieth Reunion will become a pleasant memory.

Early in March **Sherm Chase** received a note from Miss Grace Davenport, Glendale, Calif., reporting the death on February 16 of her father **George Lyman Davenport, Jr.**, I SB. He was born April 22, 1886, in San Diego but his home address was Cohasset where he graduated from the high school and entered Tech with our class, being a member of the chorus in two Tech Shows, and of the C. E. Society. Soon after graduating George joined the Penn RR, but only for a year or so, then went to California and until he retired in 1956, was with the Atchison Topeka & Santa Fe RR, except for three years when he "was connected with the Board of Public Utilities of the City of Los Angeles." With the Santa Fe he was for a time a draftsman at San Bernardino then in 1910 was transferred to Los Angeles as assistant to Engineer Maintenance of Way. From 1915, after rejoining the Santa Fe, he "was engaged principally in water supply engineering for the RR, locating wells, designing water stations (including one of the highest centrifugal pump lifts in the world,

at Grand Canyon) and having much to do with improving both water and fuel facilities for steam and diesel locomotives. In 1954 I was appointed assistant to chief engineer." George had been a member since 1925, of the ASCE, and was a longtime member of the American Water Works Association. In 1917 George married Isabel S. Sullivan of San Diego and is survived by the daughter Grace S. and son George L. to whom Sherm and I have sent a note of sympathy. In 1911 George had come back to Boston, he wrote me, but had not attended a reunion until he and his wife came east in 1956 and were present on Alumni Day at the luncheon and at the evening banquet. "I only met one man I remembered, Terrell Bartlett." In her note his daughter gives us this view of her father's career and his loyalty to M.I.T. "Dad had a wonderful engineering career and was active to the end. He was proud of M.I.T. and I remembered his playing songs from the Tech shows." George was the kind of classmate who warms a secretary's heart — his file card is full of addresses and "dues paid."

By a strange coincidence another death to be reported is that of another Course I man whose whole career was concerned with water supply systems too. **Paul Wardlaw Mack**, I SB (1911) was born April 30, 1884, in Denver and died January 6, 1966, probably in Mamaroneck, N.Y. He prepared at Morris High School in New York City, his home address then being Westchester Rd., Williams Bridge, N.Y. He was listed as a "special" in our senior year and although his photo is in our senior portfolio, he was not a candidate for a degree. What happened in 1905-6, or what he was doing the next few years, is a mystery, but he returned to M.I.T. and won his degree with the class of 1911. The first record on his file card was in 1915 when he was assistant engineer, Board of Water Supply City of New York and address was 215 Kimball Ave., Yonkers. Within a year or so however, he went out to the Philippines and was with the Metropolitan Water District in Manila, becoming chief engineer and acting manager. By or before 1940 he was back in New York City at 346 Broadway as assistant engineer designer with the same Board of Water Supply of the City of New York—after being away in Manila for 25 years! He retired to Mamaroneck in 1946 or 7 and has had the same address there ever since. The report of his death came to the Alumni Register through the Alumni Fund office and we have no information as to other activities, memberships, or family.—**Edward B. Rowe**, Secretary-treasurer, 11 Cushing Road, Wellesley Hills, Mass. 02181

'07

Please make the following corrections on your Roster of Class of 1907: **Maurice H. Pease**, VI, Lincoln Lane, New Britain, Conn., 06052; **J. Ralph Randall**, II, Apt 306, 2515 Blaisdell Ave., Minneapolis, Minn. 55404; **Julius Creidenberg**, VII, 4 Judith Dr., Greenlawn, N.Y. 11740;

**James M. Barker**, I, office 221 North LaSalle St., Suite 1348, Chicago, Ill. 60601

The Class letter relative to the Alumni Fund that our Class Agent, **Don Robbins**, sent to **John Mahar** was returned to Don with a newspaper clipping telling of John's death on January 19, 1966. John lived at 129 Gallivan Blvd., Dorchester. After graduation he served as an engineer with the Boston and Albany Railroad, Boston Structural Steel Company, and with Fay, Spofford and Thorndike. John had been sick for a long time and died at the Faulkner Hospital in Jamaica Plain. He is survived by a brother and three unmarried sisters, all of Dorchester. Don wrote a note of sympathy to the family. I shall do so also and endeavor to get further details as to his activities in the past years.

The Alumni office has sent me a newspaper clipping noting the death of **Bob Albro**, I, on February 1, 1966, which I noted in the May '66 Class notes. Bob was born and grew up in Springfield, Mass., and received his early schooling there. After graduating from M.I.T., he was associated with Fred T. Ley Company as a construction engineer and with Ernest F. Carlson, Inc., for a long time of service. He also worked for the City of Chicopee on various municipal projects among which was the revamping of Chicopee's water system. For many years he was a very active member of the Building Trades Employees Association of Springfield. Bob and Mrs. Albro celebrated their 54th wedding anniversary on September 30, 1965. The surviving family consists of Mrs. Albro, two married sons, two married daughters, and eight grandchildren. Burial was in Oak Grove Cemetery in Springfield.

## Deceased

GUY L. MORRILL, '96, March 17  
ALBERT H. SPAHR, '96, April 1  
GEORGE H. BOOTH, '98, March 6  
JACOB STONE, '99, March 25  
LEONARD D. CHANDLER, '01, January 24\*  
RAYMOND J. MAYO, '02, February 9\*  
J. ALBERT ROBINSON, '02, March 29\*  
WARREN E. CURRIER, '03, December 24  
WALTER SOHIER, '03, September  
HENRY L. LYMAN, '04, April, 1966  
GEORGE L. DAVENPORT, JR., '06, February 16\*  
PAUL W. MACK, '06, January 6\*  
CHARLES M. HUTCHINS, '07  
JOHN T. MAHAR, '07, January 19\*  
ARTHUR B. MORRILL, '09, March 27\*  
ELBERT D. GREENE, '10, February 6  
ROGER T. BOYDEN, '11, March 8  
GEORGE A. SINNICKS, '11, January 14\*  
CHRISTOPHER FALLON, '12, March 25  
LOUIS S. WALSH, '12, December 29  
HOWARD P. FESSENDEN, '13, April 19  
THOMAS A. O'REILLY, '13, February 14\*  
RALPH L. THOMAS, '13, November  
GARDNER C. DERRY, '14, March 30\*  
CHARLES P. WASHBURN, '15, April 13  
HAROLD H. BURKHARDT, '16, November 21  
PHILIP E. HULBURD, '17, March 27\*  
JOHN M. R. MARTINEZ, '17, February 22\*  
LEO S. BLODGETT, '18, March 4\*  
JAMES J. HAVERTY, JR., '18, December 13  
RUSSELL M. PEIRCE, '20, February 10\*  
HENRY B. PRESCOTT, '20, January 31\*

A note from **Tony Arnold**, II, in Wethersfield, N.J., came to me in reply to my birthday letter to him. This winter he and Mrs. Arnold are remaining at home instead of traveling as they usually do. Tony is trying to digest a six-volume edition of Gibbon's "Decline and Fall of the Roman Empire" while waiting for spring to arrive so he can get out into his gardens where he usually spends every morning when the weather is favorable. . . . **Jim Barker**, I, also wrote me in long-hand an appreciative note for his birthday letter. He expressed his regret at the loss to the Class by the death of John Frank and Bob Albro. He reported some slow improvement in the condition of **Parker Dodge's** recovery from his long illness. Jim is enjoying life as he gives up more and more the burdens of business. I quote: "My philosophy has been and is that there may not be much more time left and I ought to make use of it."

Both Don Robbins and your Secretary have been in correspondence with Mrs. Carl Bragdon. She and Carl's three daughters are interested in making a small gift to M.I.T. from Carl's estate. Don has the matter well in hand and the gift will be forthcoming. I put this in as a reminder that small gifts are most acceptable, and now is the time to see that you plan to have this money available to M.I.T. when you no longer need it. . . . Just a year from the time you read these notes will be the date for the 60th Reunion of 1907. Have we sufficient "young men" in the Class to spend a few days together at some resort? Have we enough "old men" to get out to Class Day at M.I.T. for at least one day, or is 1907 just going to die out due to old age? Don't wait for me to

GROVER C. KLEIN, '21, September 26  
HERVEY F. RETTEW, '21, December 29  
FERRIS BRIGGS, '22  
JOSEPH GIVNER, '22, February\*  
GEORGE R. HOPKINS, '22, April 3  
A. CRAIG LIPPINCOTT, '22, November 11  
JOHN F. OTIS, '22, January 15\*  
L. EMERSON SPEAR, '22, March 16  
JACK A. TISHMAN, '22, April 18  
HARRY P. KELLEY, '23, February 19  
HALL KIRKHAM, '23, April 1\*  
ARTHUR E. NIMITZ, '23, March 19  
FRANCIS H. WYETH, '23, October 13  
WILMOT A. DANIELSON, '26, March 3  
BRUCE T. HUMPHREVILLE, '26, April 15  
RICHARD W. JOHNSON, '26, March 22  
PAUL C. WOODBURY, '27, April 20  
CARL J. BERNHARDT, '28, April 4\*  
JOSEPH M. HAGERTY, '28, February 4  
ROBERT J. O'DONNELL, '28, April 16  
ROBERT A. CROSWELL, '30, March 3\*  
HORACE B. PREBLE, '30, February 23\*  
MRS. JAMES (MARY MAGDALEN) HANDRAN, '31, March 26  
KARL H. VOLKHAUSEN, '31, March 3  
EMIL T. NEUBAUER, '33, January 22\*  
HENRY M. RISLEY, '33, August 30  
G. SCOTT HAMMONDS, '34, January 27  
W. PARKER ANSLOW, JR., '36, March 17\*  
HENRY G. ELLIS, '36, April 8  
MRS. PAUL (GLADYS LYONS) MITCHENER, '45, February 11\*  
THOMAS B. MCRANN, '63, March 17  
\* Further information in Class News.



send out a Reunion questionnaire but write to me what you personally would like to do and will actually do if all goes well. This is a plug for Class Day 1966 at M.I.T. and also an indication of what our 60th Reunion will be like. If the men in the Boston area can't make Class Day this year, it is pretty sure that they will not be able to attend any gathering next year. Come out to the noon luncheon at least. The following '07 members live in the Boston District: Ashenden, Baker, Chaffee, Coburn, Cumings, Doucette, Gould, Knight, MacGregor, Mansfield, Packard, Mrs. Parlin, Perry, Richards, Robbins, Temple, Walker, Wilson, Wing, Wires and Freedman from New York. He always comes.—**Philip B. Walker**, Secretary and Treasurer, 18 Summit Street, Whitinsville, Mass.; **Gardner S. Gould**, Assistant Secretary, 409 Highland Street, Newtonville, Mass.

## '08

Our 58th Reunion will be held at the Melrose Inn, Harwichport, Mass., on the Cape June 10, 11, and 12. Headquarters will be the Beach House; as in the past, ladies are invited. Plan to be with us for a delightful weekend. This will be our ninth visit to the Melrose Inn, so we will feel right at home. . . . The following newspaper clipping will be of interest: "**Frederick A. Cole**, 81, of 55 Brookside Ave., Newtonville, a retired civil engineer, died Wednesday, March 2, 1966, at Newton-Wellesley Hospital. Husband of the late Grace E. (Perry), he was a lifelong Newton resident. A graduate of M.I.T. in 1908, he was manager, director and engineer for a number of water companies in Maine for more than 40 years. He was a charter member of the Maine Water Utilities Association and also was a member of Dalhousie Lodge, F. and A.M. Survivors include his son, Frederick A. Cole, Jr., and a grandson, Frederick Randall Cole, both of Newtonville; a brother, William Morton Cole of Squantum, and a sister, Mrs. Florence M. Bremer of Englewood, N.J."—**H. L. Carter**, Secretary, 14 Roslyn Rd., Waban, Mass. 02168; **Joseph W. Wattles**, Treasurer, 26 Bullard Rd., Weston, Mass. 02193

## '09

We have received another communication from **Art Shaw** sent March 11 while he was still in Florida: "Last Monday, March 7, I attended a luncheon meeting of the M.I.T. Club of Southwest Florida in Sarasota and had the pleasure of sitting with **Hardy Cook**. It was pleasant also to find **Joe Wattles**, '08, there. I have known him at Alumni Council meetings back in Cambridge. If we stay here that late, as we expect we may, we plan to go April 24 to the Club picnic which has become an annual affair at the Englewood estate of **Bill Grunwell**. His land runs from the Gulf to Lemon Bay and a suitable spot can always be found whatever the

direction of the wind. Your mention in the March Review of **John Davis'** career on the Cambridge Water Board is very interesting. I recall lending him books on waterworks practice when he first took the job some years ago. The city is fortunate to have a well qualified executive like John who is willing to take the responsibility of an important function like the water department. Sorry to learn of **Bob Keeney's** passing. I never knew him well until I ran across him a few years ago in court on a rate case in Connecticut with which I was involved on water matters, he in the interests of the power company."

The Alumni Office has notified us that the Institute has created a new office—Institute Estate Secretary—whose job is to promote deferred gifts such as bequests. The Office is cooperating by appointing Class Estate Secretaries in the older classes. On the recommendation of Molly, **Henry Spencer** has agreed to accept the post for our class. His letter to the class will undoubtedly have arrived some time before these class notes appear in the June Review.

We were very much saddened to receive a letter from Molly stating that he had just received the sad news of the death of **Art Morrill, IX**, in Caracas, Venezuela, on March 27, in a letter from his son, Arthur, Jr. Art died suddenly after a short illness of two weeks. The letter from Art Jr. included a clipping from "Who's Who in Engineering" describing Art's long and full career. At 78 Art was still working at Institut Nacional de Obras Sanitarias as consulting engineer and enjoying life, people, and his work, still looking actively at new projects and new studies. Many friends came to the funeral in Caracas on March 28 which was conducted in both Spanish and English by Reverend Paul Green, the minister of the United Christian Church. Art's remains were sent to Detroit for cremation. Art Jr. and his mother Georgia remained in Caracas, she for three months to conclude her husband's affairs. Art prepared for the Institute at Haverhill, Mass., High School and while at the Institute was a member of the Civil Engineering Society; Chess Club; President of the Biological Society; and participated in the Tech Shows. Space does not permit reciting all of Art's long and distinguished career as a sanitary engineer and humanitarian, and his services in promoting healthy environments both in this country and in the world at large. His domestic career involved work as a sanitary engineer in Chicago, Baltimore, Indianapolis, and Detroit. However, his great contributions were made in improving health conditions in foreign countries—China, Burma, India, Ethiopia, and Venezuela—much of which was done as a consultant of the World Health Organization. We all well remember Art coming the longest distance to attend both our 50th and 55th Reunions. At the latter he gave a most interesting talk on conditions in Venezuela and on foreign aid. Art Jr. was with him. It is difficult to do justice to Art's great contributions to world health. He was quiet, diligent, and most altruistic in all of his endeavors. He was widely known

in the profession as a most competent and distinguished engineer. Those who knew him in China, Burma, Venezuela, and in the United States admired him greatly, not only as an engineer but as a person.

Molly writes: "I am sure you will know how much both Jeanne and I are saddened by this news. A.B. and Georgia were our close friends over the years and my association with him was particularly close, because we prepared our thesis together on 'The Calf Pasture Sewage Pumping Station.'" A most appropriate tribute in verse was written by a Mexican friend. Translated into English it reads: "Quietly you lived, and quietly you slipped away. Nevertheless, you left an imprint of your step throughout the world. I do not cry for you, Arthur; I envy you, since dying after a life such as yours was only completing your noble task." We have written to Art's widow and son expressing the deep sympathy of the class, as well as our own.

These notes will arrive in ample time to remind all of Alumni Day, June 13. Be certain to attend and hold another informal reunion with all our classmates. —**Chester L. Dawes**, Secretary, Pierce Hall, Harvard University, Cambridge, Mass.; **George E. Wallis**, Assistant Secretary, Wenham, Mass.

## '10

**Robert P. Waller**, Meadowlakes Village, Hightstown, N.J., writes: "Mrs. Waller and I moved down here from Newton last September. Meadow Lakes is a housing for retired persons under the direction of the Presbyterian Homes of the Synod of New Jersey. It is proving to be a nice move for us and we are very content though we wish the place had been located nearer to Newton and Boston. However we can't have everything though here we feel we have almost everything." Mr. Arthur Schwartz '47, president of the M.I.T. Club of Southern California writes that his club honored **Hiram E. Beebe** in small token of the Club's appreciation for his past and continuing efforts, on the occasion of his 80th birthday. Hiram is and has been a member of the Board of Governors of the Club for many years and is an active participant at all Club functions.

**Ralph Horne** and his wife are taking a vacation of five weeks. They are to stop in San Francisco and Los Angeles and then take the Lurline ship to Hawaii where they intend to spend some time and tour the islands.—**Herbert S. Cleverdon**, Secretary, 120 Tremont Street, Boston, Mass.

## '11

My complaint in the March Notes that enough classmates had not written to Obie brought forth a nice letter from **A. T. Cushing** of Kansas City. His chief interest in retirement is in the American War Dads in which he holds offices at Chap-

ter, Council, State and Nation levels; and his wife is active in the Auxiliary. His three children are all married. Son Don is a major in the Air Corps; son Gerald is office manager in Los Angeles for the Powers Regulator Co.; daughter Emma is a housewife in Tulsa, Okla. There are six grandchildren. The Cushings spent a couple of weeks the last of March with their son and his family in Los Angeles. . . . **George A. Sinnicks** of Manchester, Mass., died last January. Prior to retirement three years ago he was a mason contractor for half a century. He was active in Masonic Orders in Manchester, Beverly and Salem. He left a daughter, Betsy Ann, and a son George S. . . . When Alma and I got home from a cruise to the West Indies, on which we visited five islands, we found a card from **Carl and Helen Richmond** telling of a similar, but longer cruise from which they had just returned. . . . The following address changes have come in by way of the Alumni Office: **Calvin P. Eldred**, Silverwood Drive, Talladega, Fla. 03160, and **Edwin C. Vose**, 20 Chapel St., Brookline, Mass. 02146. Let's keep the notes coming; write to Obie.—**Oberlin S. Clark**, Secretary, 50 Leonard Rd., North Weymouth, Mass. 02191

## '12

**Dr. Max Levine** has recently been honored by having his portrait placed in the Science Building at Iowa State University, as a memorial to his 34 years of service in the Biology Department. Max headed the U.S. Army Bacteriological laboratory in France during World War I and saw active duty in the Sanitary Corps during World War II, obtaining the rank of Colonel. In 1947 he was appointed the first director of the laboratories for the Hawaiian Public Health Department, a position he still holds. He is the author of three books and more than 250 published scientific and technical reports. He has been listed in 10 biographical dictionaries including *Who's Who*, *Ward's Biographer* and *American News and Science*. He is a past member of 23 professional organizations and in 1959 was president of the Hawaiian Public Health Association. He has four sons, all graduates of Iowa State; they hold prominent positions in the arts and sciences. Since retirement in 1960 he is still active in the field of micro-biology and is consultant to the U.S. Army Tipler General Hospital and Leahi Tuberculosis Hospital in Honolulu. He has recently been elected President of the National organization of the Hawaiian Section of the American Society of Micro-Biology. . . . A note from **George Sprowls** states that he is still director of research of Pyrex Inc. and greatly enjoys it. His work calls for travelling and he is making many new friends.

**Ralph M. Ferry** and his wife have had a long recovery from a very severe automobile accident, being forced off the road into a culvert some time ago. They were both in the hospital for several months and after returning home required two months more for recuperation. They both hope to be with us for our 55th reunion

next year. . . . **Jim Cook** has just left the hospital in Marblehead where he has been for three months since his bad accident of last Christmas. He has gone to his daughter's home, D. L. Hadley in Tufonboro, N.H., for further rest. His son-in-law is with the American Cyanamid in charge of pesticide distribution in northern New England. . . . When in Washington, two weeks ago, I called on **David Guy** at 3224 Morrison Avenue, N.W. and was pleased to find that he is well recovered from his illness. He had dinner the night before with **John Pettingell** and his wife who were on their way home from a winter vacation in Jamaica and with **Jesse Hakes** and his wife. Jesse is very active with his tree nursery where he specializes in rhododendrons. Jesse is living in Glenwood, Md. . . . **Willis R. Salisbury** has just returned from a winter vacation in the Virgin Islands. After a short stay at his home he goes to his camp on Hungry Jack Lake, Point of View, Grand Marais, Minn. . . . I have the pleasure of frequently seeing **Wallace J. Murray** and his wife at the Old South Church in Copley Square on Sunday mornings. They are both in good health and are probably more regular attendants than I am myself. —**Frederick J. Shepard, Jr.**, Secretary, 31 Chestnut Street, Boston, Mass. 02108; **John Noyes**, Assistant Secretary, 3326 Shorecrest Drive, Dallas, 36, Texas.

## '13

Here we are again, news of our Classmates possibly not too current but true. The Class of 1916 is planning a real 50th Reunion according to Jim Evans. We have shared Oyster Harbors Club with 1916 and certainly wish the Class of 1916 all the success in the world, but doubt if that Class can beat 1913 in numbers or quality. **Jack Horner** reports, "Hope to make the reunion (55th) if my gimpy legs will let me." . . . **Warren Gentner** reports, "I shall make every effort to attend the 55th Reunion in 1968, having missed on the 50th due to illness and death of Mrs. Gentner." . . . Warren also notified of the death of **Thomas O'Reilly** who with his wife had lunch with Warren in Hartford last Fall on their way to Boston. Tom died of a heart attack February 14, 1966 at his home at 5275 Winchester Place, St. Louis, Mo. Thomas is survived by his wife, Margaret, one son and five daughters. To the O'Reilly family we of 1913 offer our sincere sympathy as your loss is also shared by those of us who knew Tom.

We have many replies from our classmates as follows: **Bob Tullar** states: "I'll sure try hard." . . . **Bob Nowlin**, "Sorry that I will not be able to attend our 55th Reunion June 7th to June 10th, 1968." . . . **Prescott Kelly** adds, "Health permitting—yes. I have had pneumonia and three major operations this year, but now seem to be doing well." . . . **Joe MacKinnon** writes, "I regret that I will be unable to attend the 55th." . . . **Sam Rogers** reports "Probably not." . . . **Paul Cogan** states, "I expect to attend and will bring Mrs. Cogan if permitted." . . . **Geof. Rollason**,

"Hopefully yes." . . . **Ben Thomas**: "Will try." . . . **Burt Cushing**, "Yes." . . . **Joe Cohen**, "No." He does not mean it. . . . **Gene MacDonald**, "Yes, thank you." . . . **Ed Jewett**, "Who knows?" . . . **Doc Kenney**, "I doubt it, but maybe." . . . **George Dempsey**, "Definitely yes—if we are not in jail or dead." . . . **Max Waterman**, "?" . . . **Charlie Thompson**, "You bet." . . . **Fred Kennedy**, "Hope to." . . . **Dave Stern**, "Sincerely hope to." . . . **Stan Parker** states, "Sorry, can't make it." . . . **Ralph Kennard**, "Probably." . . . **Mort Allen**, . . . "Yes." . . . **Herb Shaw**, "We hope to be there." . . . **Emerson Bray** writes, "Put my wife and me down on your list for the 55th Reunion." . . . **Allan Waite**, "If possible—it's a long time ahead." . . . **Gard Alden**, "Doubtful?" . . . **Max Harrington** states, "Don't expect to be able to."

**Charlie Brown** always comes through with a very descriptive narration of that peaceful state of New Mexico; although dry, they still have periods of rain. Chas. and his dear wife have travelled to California to visit their oldest son and family. They expect to come East this year, so we hope to see them but do hope that they will join us in 1968. Although Helen had a "near stroke," we are very much pleased that she has recovered in spite of Charlie's cooking. . . . **Louis Wright** reports, "We are looking forward to one more reunion, hope we can make it. Drove a new Mercedes 200 to Italy and returned to Hamburg early this month." . . . **Fred Lane** states, "We certainly do hope to be present for the 55th Reunion. Eva and I have just returned from one of our jaunts (driving) to the West. This time we visited some of the more important places in Colorado, Utah, and Arizona (some of them for the second time) Rocky Mountain National Park, Colorado Springs, Air Force Academy, Dirango, Mesa Verda, Bryce Canyon, Zion National Park, Grand Canyon, etc. It's wonderful country. If you have not already seen it, I suggest you plan to do so." Well. I guess that's the lesson for to-day; more next month.—**George Philip Capen**, Secretary and Treasurer, 60 Everett Street, Canton, Mass.

## '14

We are indebted to Henry F. Daley, 1915, for the news clipping about our classmate **Gardner C. Derry** who died March 30, 1966. "Sharon Civic Leader, Noted Industrialist, Dies. Sharon, Mass.—**Gardner C. Derry**, 75 of 82 North Main St., a retired executive of the B. F. Sturtevant Company in Hyde Park, died yesterday at Norwood Hospital. Mr. Derry was the director, vice-president and general manager of the Sturtevant Company, which is a division of Westinghouse Electric Corporation. In a civic capacity, he was a former president of the PTA, past chairman and member of the Sharon School and Warrant Committees. He was the originator and chairman of the committee which had the Route 27 bridge constructed over the railroad crossing and landscaped the grounds of the Sharon rail-



road station. Mr. Derry, who served seven years on the Selective Service Board, was commissioned an ensign in the Navy during World War I and was a member of the Sharon Veterans Advisory Board. Born in Sharon, he graduated from Sharon High School in 1910 and the Massachusetts Institute of Technology in 1914. Upon college graduation, Mr. Derry became an employee of the Sturtevant Company where he served in all phases of the business in plants in Hyde Park, Camden, N.J., LaSalle, Ill., Berkeley, Calif., and Galt, Ontario. He was elected vice-president of the company, which produces power plant equipment for public utilities and industries, in 1933. When the company was purchased by Westinghouse in 1945, he was made director, vice-president and general manager of the subsidiary. At the same time he was vice-president and director of the Aerofin Corporation of Syracuse, N.Y.

"Mr. Derry received Westinghouse's award of merit in 1953 and retired in 1956 to engage in business management consulting. He was a director of Sharon Cooperative Bank, a member of the Alumni Association at M.I.T., a licensed professional engineer, past president of the national association of fan manufacturers and a member of the Charles R. Wilbur American Legion Post in Sharon. Mr. Derry was also a member of the Algonquin Club of Boston, the American Society of Mechanical Engineers and the Mass. Society of Mayflower descendants and the Newcomen Society. He was a direct descendant of John Alden and Myles Standish. Mr. Derry is survived by his wife, Hazel M. Derry of Sharon; two daughters, Mrs. Cynthia E. Guiry of Needham and Mrs. Jeanne Maubert of Wayland and four grandchildren. The Rev. James G. Pirie will officiate at the funeral services at the First Congregational Church in Sharon tomorrow at 3:30 P.M." Henry Daley and Gardner Derry were business associates with the old B. F. Sturtevant organization. While it is some time since we have seen Gard, we were close at school since we were both in Course VI. Our sympathies go out to his wife and family.

Dinny Chatfield has passed along a couple of bits of correspondence, one from Frank Atwood with a letterhead Atwood Realty Trust, Box 1098 Edgartown, Mass. "Dear Dinny: Thanks for your nice letter of January 28. Your pro bono publico jobs together with your travels make me somewhat envious. My wife and I tried to retire about 1949 and did enjoy a few years doing nothing. However, my wife liked to design houses and it gave me a chance to do a little engineering so we started developing land and saw the need for a good hotel so we gradually got into this business. We have a piece of land in Florida but as yet have not used it. You make me feel old talking about a 10 year old daughter. We are surrounded by a married granddaughter and three great grandchildren. Fortunately this part of our family is starting to take over some of our work. While in Boston last week I had a chance to talk with Harold. He sounded better than he has for a long time. Florence was as busy as ever. Mar-

tha's Vineyard is quite a historic place so this should give you an excuse to bring your family here sometime. In any case it was good to get your letter. Frank."

Dinny also had some correspondence with Bob Townend in which Bob reminisced, "I believe I was one of the original honorary secretaries and have helped out the Admissions Department ever since—some 35 or less years. It has been an interesting and I am told a very helpful experience." To which we might add amen.

We have a few changes in address: **Roger Williams**, Box 423 Buckingham, Pa. 18912. This is a move from Wilmington, Del. . . . Also **Arthur W. Johnson**, P.O. Box 462, Wolfeboro, N.H. 03894. This is a move from Boca Raton, Fla. . . . To top off the moves the **Harold B. Richmonds** have moved from 100 Memorial Drive to 1010 Memorial Drive, Cambridge 02138, about four miles up the river where the air is purer and besides Harold probably does not have to keep such a close eye on the Institute any more.

It's spring again (written in April) and lo and behold our classmates of an arty disposition are getting restless again, hence the following: "Dear Herman: The last class notes made me feel a little sad to observe that we have achieved the status of 'old timers' who put nothing in but obituary notices, so I thought of enclosing a not very legible copy of a slightly different type of correspondence, sporadically engaged in by Waitty and me. It seems only yesterday that I used to read class notes by the sole survivor type of class secretary and would think 'That will never happen to us fourteeners!' I get somewhat the same feeling when reading the poems of A. E. Houseman, Ah! me. It has to come to all of us. I am reminded of that famous anecdote of the three Supreme Court Justices standing on a sidewalk in Washington chatting (their average age being about 98) when a shapely little stenographer clicked by on her high heels. All conversation ceased for a few moments, then one of the three heaved a deep sigh and said, 'Ah! me, what wouldn't I give to be seventy again!' How about it! O.C.C."

The intercepted letter from **O. C. Clisham to Alden Waitt** is as follows. I am not sure whether we should classify it under Art or Philosophy. "Dear Alden: Here's hoping you stay put long enough so that this letter does not have to chase you all around the globe like a bloody astronaut. Knowing amateur painters as I do, I figure you would be interested in knowing what I have been up to. (This is a roundabout way of doing a little bragging. The enclosed clippings will explain.) However, I am not yet carried away to the extent of believing what these small town reporters dream up to get paid by the word. From sad experience I know all too well that they, and the big time boys in New York, rave on by the column about the spiritual significance of drooled paint, daubed paint in small areas surrounded by heavy black lines, with no color at all, etc. I was reprimanded once by a museum director for being too lazy to make the effort to understand it. I found later that he 'paints,' in fact I have seen some

of his opus-es (is that the plural of opus?) at local shows. One of them consisted of exactly two large spheres. What can a Philistine do? I can't lick 'em but I'll be everlastingly condemned if I'll jine 'em. Speaking of Latin plurals, did you hear about the Latin scholar who ordered a Martinus from the bar keeper? (Barkeeper) 'You mean Martini, don't you?' (Scholar) 'If I want more than one I'll let you know!' Have been reading a biography of Picasso (by one of his mistresses) which I received for Christmas. About some landscape painters he had observed with their easels set up outdoors he stated flatly that without looking at their efforts he knew that they would produce only bad painting, working that way. About himself he said that his mother prophesied that if he took up medicine he would be the greatest doctor, if the law he would be the world's greatest lawyer—but I took up painting, and now I am Picasso.' Bully for him! My credo as a landscape painter is that in nature resides an inherent beauty far beyond anything imagined by any human being's imagination. I believe that a person who remained cooped up in a studio all his life, and never saw a tree, mountain, lake, river or ocean, just to list a few, could never become a convincing or capable landscape painter. Don't think some of our amateurs haven't tried, and their efforts show their lack of vision from a distance of 50 feet. They just cannot bother to go outdoors to paint. Of such a school is the group which does the covers for the New Yorker. If any one of the 'modern' had ever produced out of their imagination a line as graceful as the branch of a tree, a shape as massive and beautiful as a mountain, or the tender grace of a child, I would yield and say they are as creative as they claim to be. You of course realize they say that that one who paints from nature is 'copying.' Little do they know of the constant process of eliminating, simplifying, rearranging, until a mass of detail becomes an organized work of art. I maintain that we are the true abstractionists—we abstract that which is essential, typical, beautiful if we are skillful and lucky enough. It is 99.9% eye training, and the reward is not in the lousy little masterpieces, but in the increasing ability to see more beauty than we ever believed was there before we started to paint. Some of my friends wish me 'Good painting.' I wish for you, 'More and better seeing' for if you see it, you have some chance, but not until then, and it takes more than just looking to see what is really there, and the beauty of it all." Yes Clish, keep seeing and you keep living. . . . We hope to see you all at Alumni Day, June 13, not too long after you read this.—**Herman A. Afel**, Secretary, Rome, Maine. Mail: RFD 2, Oakland, Maine 04963

'15

If you want to know what makes 1915 the Class Supreme, come with your families and guests to the Annual Class Cock-



tail Party, Alumni Day June 13 at 4 o'clock at the Faculty Club, 50 Memorial Drive, Cambridge. It's all free. Plenty of free parking in the rear of the building. The well established success and enjoyment of this annual party will be heightened this year by some novel features introduced by that intrepid committee of Al Sampson and Barbara Thomas. Better plan to be there! . . . On March 21 Molly and **Speed Swift** celebrated their fiftieth wedding anniversary in New London, N.H. Our congratulations to them. A Concord, New Hampshire newspaper gave them this write-up, with a good looking picture: "Mr. and Mrs. Herbert D. Swift observed their 50th wedding anniversary, March 21. They were honored at family dinner party of 25 persons at the home of Mr. and Mrs. Edward L. Tucker on Ironworks Rd., Concord. Mrs. Tucker is Mrs. Swift's niece. Mr. Swift, a native of Detroit, Mich., and Mrs. Swift, a fifth generation New London native, were married at the Church of the Covenant at the corner of Berkeley and Newbury Sts., Boston, March 21, 1916, by the late Rev. Willard Leroy Sperry, head of the Harvard Divinity School, Cambridge, who was at one time the baccalaureate speaker at Colby Junior College. Mr. and Mrs. Swift have many times been honored for their philanthropic endeavors, civic and church activities, school and town affairs. Their latest contribution to New London was the gift of their Scytherville House in Elkins. They received scores of cards, gifts and the flowers in their home looked 'like a veritable flowerland' according to the honored couple." . . . On a card from Estorial, Portugal, **Herb Anderson** wrote that Alice and he had been touring in Europe for a year and would return in April. They met several M.I.T. men on the transatlantic ships. We're glad Herb has recovered so well to make and enjoy this long trip. . . . **Larry Bailey** crushed the lower end of a bone in his left hand between his slowly rolling auto and the garage door. However, he said he'd be able to cut his own meat at the Boston Class dinner on April 15, and we certainly do hope so. Details of this dinner will be in next month's column.

**Verta and Jerry Coldwell** had their usual winter stay in Naples, Fla., but complained of the cold weather. . . . **Opal and Forrest Purinton** were down there, too. . . . **Helen and Boots Malone** dodged the severe northern spring weather by staying in Sarasota until April. Ah, me! . . . **Catherine and Max Woythaler** flew to New Orleans and then to the M.I.T. Mexico City Fiesta in March, which they thoroughly enjoyed as repeat "eager Beavers." Then they went on to Yucatan to study the Indian ruins. Our Classmates do get around. . . . In a long letter from Port Moresby, New Guinea, Australia, **Ernie Loveland** describes his unnatural Christmas under a hot, tropical sun. After his long stay in Japan with trips to the many temples, Fujiyama, Hiroshima, Nagasaki and sleeping on the floor on straw mats, caught in a typhoon and exposure to many weird oriental experiences, he landed in Australia via Okinawa, Taiwan, Hong Kong, Singapore, in search of

a special type sea-weed for his former business associates. He searched the coral reefs around the island of Timor but unsuccessfully. His experiences way down under in those mysteriously far away islands is really beyond description. He's a wonder to be able to do it and to stand it. . . . **Ed Kingsbury** is associate director of the office of development and fund raising of the Unitarian Universalist Association. He had been engaged in civic and fund raising work in Keene, N.H., for 20 years before joining the Association in 1963.—**Azel W. Mack**, Secretary, 100 Memorial Drive, Cambridge, Mass. 02142

## '16

Our good President, **Ralph Fletcher**, starts us off with: "June 1916—June 1966—50 years—we made it! Now for the big celebration. Over 120 classmates and 75 wives are planning to be on hand for part of all of this wonderful occasion. If there is any possibility at all for you to attend, even if just for an hour or only one activity, drop everything and come. If there is anything we can do to help you attend just call us. We want you to share with us in what promises to be one of the greatest 50th Reunion celebrations in the history of M.I.T. Briefly, the activities are as follows: Thursday, June 9—p.m.—McCormick hall—registration, cocktails, buffet, overnight accommodations; Friday—a.m.—Commencement exercises followed by luncheon; Friday—p.m.—trip to the Cape and beginning of a great weekend at Oyster Harbors Club; Sunday—p.m.—trip from Oyster Harbors Club back to McCormick Hall; Sunday—p.m.—guests of President Stratton for a party at his residence, overnight accommodations in McCormick Hall; Monday—all day and evening—Alumni Day activities highlighted by the presentation of the Class of 1916 50-year gift at the Alumni Day luncheon, Class cocktail party late in the afternoon and banquet in the evening, overnight accommodations in McCormick Hall. An event such as this occurs once in a life-time. Please make every effort to join us." As this is written, **Steve Brophy's** 50th Reunion Committee has been holding and will continue to hold busy meetings in New York, working out the final details for the big June program. **Ralph Fletcher**, reunion treasurer, and **Bob O'Brien**, reunion secretary, have been working out dollar plans and final mailings. The regional chairmen have been making their final contacts throughout their regions—**Jim Evans** on the Atlantic Coast plus Connecticut, **Cy Guething** of Birmingham, Mich., in the Middle West, **Vert Young**, of Bogalusa in the South, **Irv McDaniel** of Newport Beach, Calif., in the Southwest and West, and **Ralph** in New England. **Peb Stone**, with an assist from the writer, has been playing around with final corrigenda for his reunion booklet that is to list everyone who ever was a member of the Class of '16, that has benefited from the generous help given by **Azel Mack**, Secretary of '15, and that

has a special feature that cries out in advance: Wait until you see what **Chick Kane**, '24, has done to make it quite special! **Joe Barker** has continued in remarkable fashion to more-than-do what a Reunion Gift chairman is supposed to do. **Jim Evans** has been keeping in close contact with the manufacturer of the cardinal blazers that all who sent measurements will be wearing in Cambridge and on the Cape. And **Steve Brophy** himself, temporarily on a brief sojourn breather in Jamaica, has been wondering what to do with all the mountains of correspondence that have been clogging the files in his apartment in New York. We hear, too, that **Irv McDaniel** is busy, busy, busy planning the entertainment bits—so secret that nobody else has the foggiest idea of what it is all about. And in the planning stages for Osterville are rumored such things as possible short flights over the Cape with **Izzy Richmond** and with one of **Ralph's** pilots, maybe **George Blanchard**, and short roaring trips in the coastal waters with **Howard Claussen**, Navigator, in his raring-to-go "Schipperke."

**Obie Pyle** has worked hard on his list of contacts for the 50th. He reports the **Harold Fullers'** regret that they will not be able to attend; Mrs. Fuller was '16 at Sargeant and they had planned to attend the two 50-year reunions in the one trip. **Obie** also reported he was awaiting a reply from **Venaldo Harshbarger**, and has threatened to hop a Pennsy railroad train to attend one of the monthly luncheons in New York—he didn't make the April one. . . . The **Cy Guethings** are back in Birmingham, Mich., from their Harbour Island, Bahamas, winter stay, and **Cy** is wondering whether the bobwhites in Osterville will call as plaintively as ever if he gets out for morning walks at 5:00 A.M. or thereabouts. . . . **Hy Ullian** reports the following from **Tom McSweeney** in reference to doubtful attendance at the 50th: "For the past two years my office has been working on five different propositions involving studies of economic geology in three different locations in the state of Oregon. Two of them are scheduled for trial in the Federal Courts in Oregon in June and, if the present schedule is followed, I'll be at the wrong side of the U.S. to attend the Reunion, much as I'd like to. These court schedules are very apt to be changed and I am hoping they'll be put over until fall. If they are, my wife (I suppose you know she is a Radcliffe classmate of your wife) and I will, with the help of God, be with you all." . . . Says **George Hale** in Golden, Colo.: "As somewhat of an 'outlander,' having spent 38 years with a Hydroelectric Power Company in Quebec, the following 12 years in California and Colorado, I take this first real opportunity of attending a Class Reunion, the 50th—rather than waiting for the 75th. Here in Golden, I am living in 'the little house,' separated from the Homestead, on the farm of my younger daughter, her husband (a consulting professional geological engineer), four grandchildren of 8 to 15 years, and a lively young beagle. Life is far from monotonous! Last week during the children's vacation, we, tout le gang, drove in an oversized station wagon (favoured by geologists) to

visit the Taos Pueblo, northernmost village of all the pueblos in the Rio Grande Valley, close against the foothills of the Sangre de Cristo Mountains in New Mexico." . . . We must now report that **George Spooner** of Des Moines is not going to be able to make the Reunion, for he says in a letter: "The death of my wife, Gertrude, of a heart attack just three days before Christmas 1965 precludes my attending the '16 Fiftieth Reunion to be held in June. Gertrude would have had her 50-year reunion at Vassar this June also, and it was our fond hope that we might drive East together, and each of us attend our respective reunions. As it is, the joy of that trip has been taken out of it for me, and I doubt if I could go it alone. My best wishes to all of you for a successful and memorable reunion. Sorry I can't be there as planned." We are sorry too, George, and send our deepest sympathy. . . . We regret that a serious automobile accident on December 23rd, affecting his eyes, will prevent **Dick Berger** from attending in June. Dick has continued active for many years as President of Cancer Prevention, Inc. of Bridgeport, Conn. and had expected to be at the reunion in Cambridge.

We have scouts on the lookout for pictures in the news that include '16ers and, sure enough, another one has just come in from **Ralph Fletcher**—a picture of **Van Bush** in the March 1966 Commerce Digest, a publication of the Massachusetts Department of Commerce and Development. The group-of-three picture carries the title "Forty years of Progress," and underneath we read: "Electronic Acorn" from which Raytheon grew is discussed by Dr. Vannevar Bush, left, Dr. Percy L. Spencer, center, and Raytheon President Thomas L. Phillips, right. In the early 1920's, Dr. Bush, a distinguished scientist and now professor emeritus at M.I.T., and Dr. Spencer, who recently retired as a senior vice-president of Raytheon, worked together at American Radio Company, the firm that spawned Raytheon Company. The 'electronic acorn' was a gas-filled rectifier tube that converted household electricity to direct current for plug-in radio operation. Here, Phillips compares 40 years of progress as he places 'original tube beside modern integrated circuit combining multiple transistors and resistors on a single chip of silicon the size of a pinhead."

A card postmarked Rome in mid-March brought this message from **Rudi Gruber**: "Have been on a 'quickie' tour through Germany, starting in Hamburg, and am on my way back to Colonia, N.J. It has been very cold here—snow in Naples yesterday!"

**Dick Knowland** mentions two recent contacts in Largo, Fla.—the **George Urquharts**, '15, and the **Don Websters**, '16. As for the Urquharts: "We had a most rewarding get-together with him and his charming consort, Ruth—George being of 1915, we recognize a sort of common bond, since I was in both 1915 and 1916 in a way, having come near to shifting to Harvard, in the interim. Don Webster called in with the inimitable Mrs. Webster, and I am beginning to catch up with a few odd Class items." Dick adds in most interesting fashion, and with his permission, we

quote: "We are residents of Florida, although still in a way headquartered in Goshen, Mass., where we have been summer residents for at least 35 years. I am retired except for a complaisant client of long standing. Kate-the-Great is interested in flowers, Ikebana, and what not and I am only interested in raising them. And I do a very poor job in Florida, not being entirely headquartered here yet. You know, Harold, it is very difficult to say anything of underlying interest to one's classmates when one has been so long separated from them. I am, I trust, not so stupid as to suppose that anyone will hang upon what I may say. But the class of 1916 was composed of very delightful associates, the men were dominantly able—I trust more on the average than I—and it was a simply swell group of geniuses as I recall. If this is a hair-brained reply to your letter, be a good guy and make the most of my mental limitations. Note: be an even better guy and make the least of my mental limitations!"

**Ralph Davies** in Pittsburgh gives a bit of philosophy which he says many may not agree with, namely: "that after 65 years of age, or at the most 70, one should not take on anything which might interfere with a leisurely pattern of living. For example, a year ago, I gave up a part-time job at Carnegie Tech's Graduate School of Business Administration. Every so often it interfered with an afternoon of bridge or golf. Also I resigned recently as a Republican ward committeeman, as I strongly feel that this is a younger man's job." And

## 50th Reunion

as for problems and excitement, **Ralph** adds: "In November, we left Gibraltar, for home on the **Raffaello**, which caught fire in mid-ocean, lost an engine, and took six and a half days to limp back to Genoa. We then took a plane from Milan, arrived in New York during the blackout, went to Bradley Field near Hartford, reached the Statler Hotel in Hartford in the early A.M. only to find our luggage had gone to New York on another bus! Home looked so good to us we've been there ever since!"

Speaking of travel, how about this? **Peb Stone** writing from St. Thomas, U. S. Virgin Islands where he and **Dolly** went for part of the month of March, says: "Ran into **Theron Curtis** and his wife last night at Bluebeards. He said he recognized my pipe, but I'm afraid that's not all. He's been bumming around the Caribbean for a month or so." And another card from **Peb** was postmarked somewhere around Bellevue, St. Martin, F.W.I. and bears the message: "This is from the French part of St. Martin's—we are staying in the Dutch part. Both parts are entirely friendly with each other—United Nations please note. Wonderful relief from New York in March—easy to forget about snow and furnaces. Water about 80 degrees—good snorkeling—very efficient casino: Black Jack, One Arm Bandits, Roulette, gin \$1.20/5th!" Now there's a message with content! The Stones got home on April 1 and **Peb** is once more working at the Reunion booklet; be sure to get yours at the 50th!

And more on travel: In early April, **Elsa Mueser** reported on their just-finished trip that included Costa Rica, San Salvador, and Guatemala. She notes: "We had many adventures, saw many places of interest, such as the Mayan Ruins in Ticul, Harvard diggings in Flores, House of Popenoe in Antigua, and long walking trips to semi-active volcanoes—need a rest, need our heads examined because of some of the hair-raising rides—dugout canoes, broken down buses, and general living in the jungle (cold at night), damp beds, mud, no hot water, no water, nothing drinkable, etc. Very glad to get home—and to find a day's reading of all the wonderful reunion plans." **Elsa** and husband **Ed** (Columbia '15) will be at the 50th and she will be wearing what may be the only distaff blazer—or maybe one of the two! She reports an attempted contact with **Elizabeth Pattee** in April, and that **Elizabeth** was busy lecturing at Rutgers University. . . . **Herb Gilkey** of Ames, Iowa undertook an important and delightful service for the Institute, when he represented M.I.T. at the inauguration of **William Roberts Parks** as President of Iowa State University on March 22nd. As you may recall, **Herb** is now professor emeritus and was for many, many years professor and head of the Department of Theoretical and Applied Mechanics of Iowa State in Ames.

Word from **Stew Rowlett** (our 50th Reunion Registrar) in Clearwater told of enjoying many bridge games in March with **Duke Wellington**, but that **Duke** had to go up to Boston for an eye problem. Our telephone chat with **Duke** cleared the air—he reported that things are coming along very well. . . . And word from **Francis Stern** in March from California told of his locating another classmate also resident in Palm Springs—**Walter Metz**—and of the fact that they were about to play golf together. Later word from **Walter** says that **Francis** plays good golf, something that ordinary golfers should keep in mind if they are planning to go out on the fairways at the 50th in **Osterville**. From **Walter** we got a bit of history. He went to California in 1923, organized the Metz Products Corporation in 1925 and manufactured various wood products, aircraft parts, refrigerators, etc., and sold out in 1945. He says: "I then retired for about three years, played golf every day and got so sick of golf clubs I never wanted to see one again. Since then I have been in the contracting business, off and on, building homes, apartments, and what have you. My latest venture is the Sparkle Car Wash, which I am interested in with my son-in-law. It's quite a hectic operation but it is interesting."

We have an interesting letter from **Arthur Schwartz** '47, president of the M.I.T. Club of Southern California telling of a recent activity of one of their long-time members, **Saul Hoffman** '16. He writes in part: "At a recent meeting in Los Angeles, Mr. Hoffman presented a banner to our M.I.T. Club for the Club's use at future meetings. This banner measures 2½ by six feet, and has the Club name and the M.I.T. seal in red letters printed on a silver grey felt. The Club is deeply indebted to Mr. Hoffman for his interest in



its and Alumni activities in general. We are pleased that on the eve of his 50th Reunion he feels so close to M.I.T. that he manifests this in his contribution to local Alumni activities." . . . **Allen Giles** has for 30 years been chief engineer at Longwood Towers Apartment Hotel in Brookline, handling the maintenance and the modernization of a building constructed in 1924 to compete with the high-rise apartments of the current era. It has meant, too, solving the living problems of the 500 tenants over this 30 year period. In his home town of Melrose he has been more than busy with 25 years of public service: 11 years on the Melrose Planning Board with two years as Chairman; 10 years on the Melrose Board of Alderman and Chairman in 1944; and four years on the Melrose School Committee. Melrose is a city of 30,000. He has been a member for 30 years, and president twice, of the Melrose Highlands Congregational church. Put these things all together, and you have the specification of a very busy '16er!

Two years ago **Ed Barry** bought a new house in Sherborn with about two and a third acres of land, mostly woods, where he and his wife are enjoying "the quiet life" and take pleasure, as do many of us, watching and feeding the birds. He retired in 1959 after 17 years as mechanical engineer with Stone and Webster, and they then took the awaited opportunity to tour Great Britain by car. Some years ago Ed was elected a Fellow of the American Society of Mechanical Engineers and has authored a book entitled *Introduction to Geometrical Transformations*, a college text book to be published this month. Says he: "This is the extent of my professional accomplishments. For hobbies, I fool around with mathematics and music." He regrets he will not be able to be at the 50th but sends greetings to all '16ers. . . . The **Don Websters**, who can't be at the reunion, report a pleasant stay in Florida with visits with the **Bill Wyldes** in Anna Maria, the **Walter Wolfes** in Bradenton, the **Dick Knowlands** in Largo, the **Emory Kemps** in Sarasota, and a two-day bit of togetherness with Dick and Helen Rowlett in Clearwater. The Websters will be abroad at Reunion time. Among other places they'll visit Ireland, and as Don says: "I will revisit Trinity College (founded by Elizabeth I) where I spent a few happy months in 1919. I expect to find things just about where they were 47 years ago, including my old dormitory and old dining table in the Great Hall where we feted aviators Alcock and Brown at dinner after their landing in Ireland on the first non-stop transatlantic hop from America (Newfoundland) in June of that year."

Seven '16ers showed up at the April monthly luncheon at the Chemists' Club in New York: Joe Barker, Walt Binger, Harold Dodge, Mac McCarthy, Francis Stern, John Fairfield, and Peb Stone. And again we had high quality '17 companions with Joe Littlefield, Bill Newberg, Dick Loengard, and Burt Morton. The chef's delicious golden buck still continues to be the favorite at these gatherings. There'll be no June luncheon for '16 because the Thursday following the first

Monday in June comes on the 9th, and June 9 is the day we sign in for the 50th in McCormick Hall on campus. So . . . all aboard for the Reunion in Cambridge and at the Oyster Harbors Club in Osterville. As the opening message of our President implies, if you've had a last minute favorable something-or-other and are now able to come to any part of the program at all, just call Ralph Fletcher in West Chelmsford (617-251-4031) or Steve Brophy in New York (212-PL1-1429) or your Secretary in Mountain Lakes, N.J. (201-334-2256)—we'll see you there. And finally, once more, to keep the column busy and interesting, write a little but write often to any one of your Class officers—**Harold F. Dodge**, Secretary, 96 Briarcliff Rd., Mountain Lakes, N.J.; **Ralph A. Fletcher**, President, Box 71, West Chelmsford, Mass.; **Joseph W. Barker**, Vice-president, 45 Beechmont Dr., New Rochelle, N.Y.; **Hovey T. Freeman**, Treasurer, 45 Hazard Ave., Providence, R.I.; or **T. D'Arcy (Steve) Brophy**, Reunion Chairman, 470 Park Avenue, New York, N.Y.

## '17

Two months from the date on which these notes are written, a goodly number of 1917'ers will be on their way to Cambridge to participate in the Alumni Day activities on Monday June 13. None of us have to be reminded that this will be our 49th reunion and a prelude to our big 50th next year. . . . Our class has its quota of aviation pioneers; **Ray Brooks**, **Ken Lane** and **Ed Aldrin**. The move of the latter from his home in Montclair, N.J., to Brielle, N.J., was the occasion for an article in the Asbury Park Evening Press of April 4, from which the following is taken. "Edwin E. Aldrin is a man who's seen aviation grow from the era of putt-putting biplanes to supersonic jets, and he can boast a role in the story. He is a retired Air Force colonel and aeronautical engineer who knew and worked with such aviation greats as General Billy Mitchell, Amelia Earhart, Charles Lindbergh, and Dr. Robert Goddard, a father of modern rocketry. What he has to tell about those people and their times could fill volumes. In fact, the Air Force Historical Division is planning to interview him on video tape to get his recollections on the record. Col. Aldrin, a robust 70, recalls the earliest days of aviation with as much ease as most men remember last year. He keeps busy now 'just keeping up with what's new.' He and his 36 year old astronaut son, Edwin Jr., are the only father-son team to hold doctorate degrees from M.I.T. The younger Aldrin, called 'Buz' by family and friends, is an Air Force major and was recently named to a Gemini backup crew . . . Col. Aldrin retired from free-lance consulting last year when he and his wife moved from Montclair, their home for 36 years, to a spacious garden apartment at 15 Brandywine. He believes the phenomenal growth of aviation in the past 50 years, from infancy to space travel, will continue in the future. 'Now comes the sec-

ond spinoff in this growth, the popularity of private and business flying,' he says. He foresees a day when noncommercial flights will be as numerous as commercial ones. 'Private aviation is starting to come into its own,' he says; 'business aviation has already come into its own.' Though he admits to sometimes 'rushing in where angels fear to tread' during his career, he is hesitant to predict the use of rocket or nuclear power in commercial aviation in the near future. Col. Aldrin said he's heard the rocket theory advanced since the 1930's. 'And we haven't made much progress since then' he said . . . After establishing and heading a military aeronautical engineering school at M.I.T., he was transferred to McCook Field in Ohio. The Army was just stretching its aeronautical wings and the need for a supportive engineering staff was becoming apparent. So the young first lieutenant was given the job of establishing the first aeronautical engineering school for Air Corps officers. It is now the Air Force Institute of Technology, at Wright-Patterson Air Force Base, near the original McCook site . . . While at McCook, Col. Aldrin turned the tables on his pilot-student officers and took flying lessons from them. He soloed in an open-cockpit 'Jenny' after six hours instruction and still holds his pilot's license. In 1922, while stationed in the Philippines, he met and married a chaplain's daughter. Besides their son they have two daughters and 10 grandchildren now . . . It was there that he first met General Billy Mitchell, already a controversial figure in his fight for rapid development of air power. Two years later, in 1924, he served briefly as Mitchell's aide during a tour through Siam. From then until the time Mitchell died the two remained friends and it was Col. Aldrin who piloted Mitchell on his last plane ride in 1936. He remembers the court-martialed general as radically progressive and unafraid to risk his career. 'He had great imagination and vision,' Col. Aldrin recalls. In 1928, at the rank of captain, Col. Aldrin resigned from the Army to take up a business career in the general field of aviation."

Two more of our classmates we will miss at our 50th reunion: **Philip E. Hulburd** died at Meriden, N.H., on March 27, and **John M. R. Martinez** died on February 22. Phil Hulburd was 71 years old. He prepared at Phillips Exeter and graduated from M.I.T. in Course IV, Architecture. He was a Captain in the U.S. Army A.E.F. Coast Artillery. He was appointed instructor of mathematics at Phillips Exeter in 1919 and was professor and head of the Department of Mathematics when he retired in 1959 to his 100 acre woodland home in Meriden, N.H. . . . John Martinez, who lived in New Haven, Conn., graduated from Course V, Chemistry. He was 73 years of age. In the May 1961 notes he said: "I am a bachelor of long standing and have been retired from business for three and one-half years. I keep busy doing some committee work for the United Fund and also indulging in some of my hobbies: aviation, photography, and figure skating. I also like to go to concerts and attend lectures on interesting subjects. I do a moderate amount of read-



ing and some library research on various subjects that crop up from time to time." He was associated with the Winchester Repeating Arms Company of New Haven before retirement. He served in the chemical warfare branch of the Army in WWI and during WWII was a pilot in the Civil Air Patrol, reaching the rank of Lieutenant Colonel. He maintained his interest in aircraft and continued flying as a light-plane pilot until a few years ago.

The 18th Annual Fiesta of the M.I.T. Club of Mexico City on March 10 to 12 this spring was as always an outstanding affair. The Strattons were the guests of honor and the Severances also participated. The Class of 1917 had its usual fine representation; the **Bill Dennens** including two sons with wives, the **Ray Brooks**, Conchita Lobdell, who is vice-president of the Mexico City Club, the Severances and **Al Lunn**. The Mexico City Club gave awards to the "Eagerissimo Beaver" captured by Bill Dennens for attending 10 fiestas, and the "Eager Beaver" which went to Al Lunn for attending his fourth. The program was outstanding and included a lecture by Dr. Max Millikan of the M.I.T. Faculty. . . . **Selden Senter** writes from Shreveport, La.: "I was in the Class of 1917, but only stayed at M.I.T. for one and one-half years when I joined up with the American Field Service for service with the French Army, later transferring to our own army. I spent four years in the war and when I came out, instead of returning to M.I.T. as I should have, I went into various commercial enterprises. My brother, E. G. Senter, Jr., did return to M.I.T. and finally graduated with honors. I will always regret my failure to return. However, the time is late and such mistakes cannot be rectified." Selden is president of the D. R. S. Beveridge Company of Shreveport, La.

**Dick Loengard**, who is pinch hitting as M.C. of the New York Tech Club in Dix Proctor's absence writes, "The 1917 March luncheon brought together the following: Ken Richmond, Bob Erb, Ed Payne, Enos Curtin, Bert Morton, and Dick. Ed Payne was up from Washington and it points up one of the main reasons why the luncheons are as attractive as they are since they afford an opportunity for classmates from more distant points to renew old acquaintances. For those who occasionally get to New York the 17'ers meet at the Chemists' Club, 52 East 41st Street on the first Thursday after the first Monday in each month except August. . . . **Dean Parker** advises, "we have had a good winter in Florida. Outside of a short cold spell in January, the weather has been good and sunny most of the time. I am feeling pretty well but get tired quickly. We will be leaving around the first of April for Bay Shore, Long Island." . . . A Hartford news item reads: **John M. DeBell**, co-founder with Henry M. Richardson of DeBell and Richardson, Inc. plastics business in Hazardville, retired as chairman of the board in March. He served as the Corporation's first president from 1946 to 1962. DeBell and Richardson formed the company as a partnership in 1943 in Springfield, Mass., and moved it to Hazardville in 1948. DeBell, who now resides at Crescent Lake in Enfield, will

continue with the company as a consultant.

Lt. Gen. **Leslie R. Groves** (USA-Ret) who headed the Manhattan atomic bomb project in World War II was the Honorary General Chairman at a seminar in February in Washington sponsored by the M.I.T. Club on the subjects of lasers and masers. . . . You may recall from the April notes a report of the formation of an "Old Guard" group of retired business and professional men in the West Hartford area on February 1 with an initial attendance of 37. After two months of weekly meetings the membership amounts to over 150, with a good assortment of presidents, vice-presidents, engineers, sales managers, etc. About 20 different activities have developed, including bridge, fishing, gardening, golf, hiking, lawn bowling, photography, shuffleboard, state and national affairs, woodwork, music, painting, civic work, study of securities, pin bowling, stamp collecting, antique clocks, coin collecting, bells, radio and television construction and repair, sailing. Do you have a group in your location?

Since General de Gaulle is in the limelight at present, you may be interested in the following anecdote about him: Supposedly the general went to see a collection of impressionist paintings. Stopping in front of one he said solemnly, "Beautiful, this Renoir. Absolutely magnificent!" "True, mon général," said his aide, "but actually it's a Manet." A few minutes later the general stopped in front of a landscape. "No one!" he exclaimed, "could paint the countryside like van Gogh." "No doubt," said his aide, "but it's a Pissarro." Finally de Gaulle, after a few more rounds, stopped and intensely peered at the portrait in front of him. "You can say what you want," he bellowed. "But I cannot understand Picasso at all, especially in this period." "Pardon, mon général," mumbled his aide. "But this is not a Picasso. This is a mirror."—**W. I. McNeill**, Secretary, 107 Wood Pond Road, West Hartford, Conn. 06107; **C. Dix Proctor**, Assistant Secretary, P.O. Box 336, Lincoln Park, N.J. 07035

## '18

All that is resolute, strong hearted, and of high faith comes alive with expectancy in the spring, despite which it is so hard for some engineers to express themselves. **Dick Wilkins** retired from a vice-presidency of the Revere Copper and Brass to write from 122 Gadsden St., Summerville, S.C., "We have settled down here to become what is known as a Southern fried Yankee. We have good hunting, and a wide choice of fishing waters—rivers, lakes, and ocean. I have as much fun running my 'Boston Whaler' around as I do fishing. We are planning to spend July in the West Indies, and to head for the Maine coast in August. I have a charming wife, and as the shadows creep through the windows, we are still very much in love. Please extend my warm greetings to all classmates." . . . As this is being written, spring struggles to reach New England with a burst of glory. Tonight,

however, **John Kilduff** is not quivering with expectancy. He is thinking and yearning for the cock pheasant he saw this morning feeding beside a mate in John's backyard woods. He is visualizing the dainty footprints where the grey squirrels recently left tracks in the snow under his oaks. He is groping through memory for the jubilant gloria in excelsis evensong of the hermit thrush which has come at twilight from the pinnacles of his maple for so many summers. No one can see over a telephone wire, but I could almost catch him brushing his eyes with a forearm as he told me how his personal Garden of Eden must make way for what we call progress. His struggle to be the final deterrent which would prevent the Town of Amesbury from taking ten of his precious woodland acres, as part of the location for a new high school, failed a few hours ago. Now, he can only anticipate the lumberman's sacrificial axe and saw, followed by the arsenic hour of raucous youngsters, before and after school, replacing the pheasants and the squirrels, and the thrush. But he did have a moving story about Waldemar McGuire, which he promised to send me.

Writing from 45 Popham Road, Scarsdale, N.Y., **Sidney Marine** is a bit limping of foot, but obviously strong hearted and of high faith. He says, "I was retired from the Air Service in World War I (with pay) after that crash I had in France, so, when the big depression wrecked the business I was in in New York, I began to do some private tutoring—mostly high school subjects. I have been doing this now for 27 years, and have enjoyed a fine business, and a fine life. No more commuting. I get up, walk 30 feet, and I'm in business, as all the students come to me on a regular schedule. My life has been most rewarding. Now I am getting the second generation of students, which is also gratifying. I have a dear wife, a fine son who runs a public relations business in Los Angeles, and four beautiful granddaughters. I am satisfied. What more do I want? For hobbies, I have antique clocks to work on, stereo photography, and American History." . . . From 10 Crestmont Road, Montclair, N.J., **Herb Larner** tells a little about himself and adds a word of high faith in a departed classmate. "Mildred and I have been away all winter to find the news of **Leo Blodgett's** death in the New York Times, on our return. I knew him well. He was a splendid person, devoted to his family, his friends, his church, and the work he carried out with such industry and success. He will be missed by many people, including us." . . . The Alumni Register informs me that **Frank W. Travers**, Course X, of Bryn Mawr, Pa., died February 18. Unhappily neither they nor I have so far been able to unearth any further details, however resolute we were.—**F. Alexander Magoun**, Secretary, Jaffrey, N.H.

## '19

**Dean Webster** writes of his very active life, although he is officially retired. He still keeps in close touch with the family

business, H. K. Webster Company, feed manufacturers. He also is president of the Lawrence General Hospital in Lawrence, Mass., which involves many trustee and committee meetings. The hospital has just completed a \$4,250,000 addition. He took an extended winter vacation in Florida, Arizona, San Francisco and Pinchurst. . . . We had a nice visit with Mady and Bill Banks who were at Pompano Beach in Florida during the month of March. Bill is president of The Macallen Company in Newmarket, N.H. In the summer they are at Bourne near Falmouth on the Cape where they have a large house, big enough to entertain four children and 12 grandchildren, one family at a time. Both the Banks and the Smoleys spent some time looking at new apartments with an eye to the future, and ran into Sax Fletcher '18 doing the same. . . . Stopped to see Ren and Grace Smith who are living an idyllic life on the banks of the Potomac at Lottsburg, Va. They have just purchased a new boat and expect to spend many hours on the water this summer. Ren has seen Al Kruse '22 and Bud Fisher '18, both residing in Wilmington, Del. . . . Saw G. Locke Baum, 421 N.E. 35th St., Miami, Fla., who is anxious to hear from any of his classmates. . . . Two new addresses: George H. Wiswall, Jr., R.F.D. #1, Box 141A, Woodstock, Vt. 05091, and Karl F. Rodgers, Church Lane, Towaco, N.J. 07082.—Eugene R. Smoley, Secretary, 30 School Lane, Scarsdale, N.Y.

## '20

One of the things that keeps your poor old Class Secretary from calling it a day is the friendly letter from a classmate that has not been heard from for some time. I must admit that such letters have become few and far between (maybe a new secretary would be a mighty good idea). However, one such has just come in from Frank Maconi, writing from his relatively new, ranch type home at 133 State St., Framingham, Mass. The Maconis had previously moved from their large home in Framingham to Holliston. At that time his wife, Marion, had an accident that made it hard for her to move around so Frank bought the ranch house to make it easier for her and two days after they moved in she died. I am sure I speak for the class in extending deepest sympathy to Frank. After many years as an executive with Bird and Son, Frank went with Babson's Reports and is still active there. His son, Roger, runs a color printing business in Southboro and has provided Frank with three grandchildren. Coin collecting, gardening, a basement workshop and an actual country store, down cellar also, keep Frank busy. The latter is the result of his collection of American country store antiques. Frank is on the committee for his 50th anniversary from Newton High this June and we look forward to having him at our 50th four years hence.

More information on a couple of our doughty globe trotters: Foster and Gladys Doane are back from a long trip to

South America, preceded by a stay at Frank Badger's comfortable and attractive motel in Hollywood Beach, Fla. After motoring to Paramonga to inspect the W. R. Grace paper mill, the Doanes flew to Santiago, Buenos Aires, Rio and Sao Paulo. As mentioned before, Foster is one of the leading pulp and paper experts in the world so he visited many mills and timberlands. He considers that Brazil has tremendous potential for his industry as, due to the climate and rainfall, the rate of tree growth is phenomenal. . . . Norrie Abbott reports that his tour of Mexico was completely successful and enjoyable. Besides taking in the M.I.T. Fiesta at Mexico City, Norrie and Betty covered Cuernavaca, Taxco, Acapulco, Puerto Vallarta and Cozumel, the fancy new resort area where they rested up after clambering over ruins and temples. Needless to say, the Abbotts had a delightful time at the Fiesta. "Count" Dumas was the only other 1920 man present this year, Norrie says. The Abbotts join the Bugbees in recommending this without reservation to other classmates looking for an excuse to go to Mexico in March.

Frank Badger is regional chairman for the 1966 Alumni Fund, Ft. Lauderdale region. . . . Oscar P. Young, whose appointment as president and director of Lytron, Inc., was mentioned in last month's notes, may be reached at the Engineers Club, 32 W. 40th St., New York City. . . . Regretfully, your Secretary reports that our ranks are thinned by the passing of the following classmates. Downs McCloskey died late last year. His home had been at 736 Burleigh Drive, Pasadena, Calif. . . . D. D. Williamson's death has been reported but no address or date has been ascertained. At one time he resided in Austin, Texas. . . . Henry Prescott died on January 31. A long time resident of Northfield, Mass., Henry had been an industrial engineer with Gulf Oil Corporation prior to retirement in 1960. Since then he had been associated with the Polymer Research Institute at University of Massachusetts. He leaves his wife, Marjorie, and two sons. His home was at 116 Main St., Northfield. . . . Russell Peirce died on February 10. A native of West Newbury, Mass., he had been a prominent architect in Newburyport for many years and had designed many of the public buildings of that town as well as a number of private dwellings in the area. He was a member of the Boston Society of Architects and the Dalton Club of Newburyport. His home was at 7 Upland Rd., Newburyport. He leaves his wife, Margaret, a son and a daughter. —Harold Bugbee, Secretary, 21 Everell Rd., Winchester, Mass. 01890

## '21

They're here—NOW! That pair of events you've long waited for—our 45th Reunion and Alumni Day 1966! We're looking forward to the pleasure of greeting you and your wife and having you both join with your best friends on earth in five days of sheer enjoyment. No time

to bother about details—just get on the phone if you haven't already made your arrangements and call Melvin R. Jenney at his office, 24 School Street, Boston, Mass., 02108, where the number is 617 227-6300, tell him you're on your way to the reunion and what your plans are for Alumni Day. At this late date, you'd better call the Griswold Hotel and Country Club, Groton, Conn., and arrange for your accommodations and check-in on Thursday, June 9, when the '21 group will arrive during the afternoon and evening. Groton is easily reached by rail, air, highway and boat—take your pick. You may also wish to phone the Alumni Association Office at M.I.T., 617 864-6900, Extension 4874, and ask Miss Marvin to make reservations for you at Alumni Day on June 13 in Cambridge. If you made your reservations earlier (and, we sincerely hope, you also fully completed and sent in that questionnaire to help your Secretary maintain this column), there is nothing for you to do now but start your travel to Groton in the full anticipation of a lot of enjoyment and a grand vacation in a choice spot in New England. We'll see you there!

Two momentous news events take the fore this month. First, William J. Sherry of Tulsa was given the well-deserved honor of being nominated as vice-president of the Alumni Association of M.I.T. and, since he got 100 per cent of the '21 vote, he was elected by a tremendous margin. Don't forget that one of your first duties is to congratulate Bill on this honor and to welcome him as a member of the official family of Technology. Bill has long been active in that official family and has devoted major effort as a member of the M.I.T. Corporation; the Committee on Development; a member of the Visiting Committees for both the Division of Industrial Cooperation and for Earth Sciences, of which he was chairman for two years; and the Alumni Association's National Nominating and Long Range Planning Committees. In 1957, he was the chairman of the Tulsa Regional Conference, where he earned the title of "Mr. M.I.T. of Oklahoma." When Bill finishes his duties for Technology, he may sometimes be found at the office of the Sherry Petroleum Corporation, in Tulsa. Unfortunately, a last-minute conflict in his schedule will apparently prevent Bill and Margaret from attendance at Groton but he now plans to be present on Alumni Day.

Next on the front page is Saul M. Silverstein, who was tendered a formal dinner at the Hotel America, Hartford, Conn., in recognition of his becoming chairman of the board of Rogers Corporation and his 36th anniversary with the company. Saul joined Rogers as technical director and has been president since 1946. We are delighted to have a handsome souvenir program of the festive occasion, graced with a striking Karsch photo of the new chairman. A human touch was added by a wallet card reading: "This card entitles (the bearer) to one great towering heap of gratitude for supporting, putting up with and generally making it possible for the undersigned to celebrate his 36th anniversary at Rog-



ers in such happy, healthy and prosperous shape (not quite a 'perfect 36'). I'm grateful—and you're entitled to know it! Many thanks!" We missed an opportunity to congratulate Saul—accompanied by Rigi, he had left the day before on his 21st foreign trip, outlined in this column last month. His capable secretary, Faye Clapp, gave us further interesting information. Saul is visiting Istanbul to attend the meeting of the board of governors of the Conseil International de l'Organisation Scientifique (C.I.O.S.) as the representative of the Council for International Progress in Management. His travels to Belgrade, Budapest, Prague, Warsaw, Moscow, Leningrad and Helsinki are all in the interest of the 40-year-old C.I.O.S., a non-political non-profit association which has consultative status with the U.N. and is devoted to national management movements in promoting the human, technical and economic aspects of scientific management. Rigi and Saul will be back in time to attend the reunion and Alumni Day. The guidance of Rogers Corporation, a diversified manufacturer of nonmetallic materials and molded circuits, is in the hands of its new president, Norman L. Greenman '44.

Writing from his home at 3505 Langrehr Rd., Apt 1A, Baltimore, Md., 21207, Col. **Asher Z. Cohen**, Ordnance Corps (retired), says: "Three reasons impel me to write. First, I want to extend to you my sincerest wishes on your retirement, Cac. I hope it will enable you to do many things you have been postponing from year to year for lack of time. I do hope that you and your family will enjoy the best of health in the coming years. Second, I want to congratulate you on your outstanding performance as Secretary of our Class. I am not unmindful of the hard labor and work it entails. I look forward to receiving each issue of *The Technology Review*; my first impulse is to read our Class news, which is so well presented. Third, I must apologize to you for failure to do my part in sending in any information which may be of sufficient interest to be included in the Class notes. You will note from the enclosed completed questionnaire that my wife and I plan to attend our 45th reunion. I am looking forward to meet again many of my classmates whom I have not seen since 1946. Sincerest personal regards." Asher is now a member of the civilian staff of Edgewood Arsenal as supervisory chemical engineer on weapons systems. He holds the Legion of Merit military award and the civilian Sustained Superior Performance award. He and Clara have two married daughters; Grace, who attended Alfred and Temple Universities, and Elaine, Washington College and Upsala, and five grandchildren. Thanks for your kind words, Asher. . . . **L. Willis Bugbee, Jr.**, writes that he has moved his home from Grosse Pointe Farms, Mich., to a new address at 914 Lafayette Towers West, Detroit, Mich. 48207. Willis had been a partner in the Detroit patent law firm of Barthel and Bugbee. Whether this move signifies retirement or a desire to be nearer his office can't be determined by your scribe without his completed questionnaire, which has so far not been received.

. . . **Malcolm S. Burroughs**, '20, writes a delightful letter to say that he will attend our reunion and we are happy to extend a sincere welcome. Buzz says that he has been in touch with his old buddy, **James S. Parsons**, and that they will bunk together at the Griswold.

**William Thompson Smith** has retired as supervising senior engineer of Ford, Bacon and Davis, Inc., New York City, and makes his home at 25 Rockwood Drive, Larchmont, N.Y. 10538. He is still active as a consulting engineer. The Smiths have three married children, two sons and a daughter, and 11 grandchildren. . . .

Also retired is **John M. Giles** of 911 Live Oak St., San Angelo, Texas 76901. Jack had been president of Klauder, Weldon, Giles Machine Company of Philadelphia, Pa., manufacturers of dyeing machinery. He is active in the San Angelo Country Club, the Elks, as a director of St. Johns Hospital, San Angelo, and in the American Association of Petroleum Geologists. The Giles have a daughter, Linn, who attended Lindenwood College and Texas Tech. Jack says he and Louise will attend the reunion. . . .

**Hilliard D. Cook** is professor of pulp and paper technology at North Carolina State University, Raleigh, N.C. 27608. He has been teaching since 1956 and, prior to that time, he spent years in the paper industry as a consultant and with S. D. Warren Company and Sweet Brothers Paper Manufacturing Company, Inc. Active as a writer of numerous articles, ranging in subject matter from his prime interest in paper to one on large meteor impacts, he is also the author of the chapter on cylinder paper machines in Volume II of "Pulp and Paper Science and Technology." He is a past chairman of the Empire State Section of the Technical Association of the Pulp and Paper Industry. We sincerely regret to learn of the death of the Cook's only son, who leaves his wife and four children. At this writing, Hilliard and Eleanor are not certain of their reunion and Alumni Day attendance. . . . Mary Margaret and **Allen Addicks** expect to be with us at Groton and Cambridge. Writing from his home at 203 Baldwin Path, Deer Park, L.I., N.Y., 11729, Allen says he retired early this year from his own real estate brokerage business. He had been active with the National Association of Home Builders and the Home Improvement Council. He is a former president of both the Civic Association of Great Neck and of Brookville, N.Y., and maintains his interest in bridge and an antique car club. . . .

**Herbert K. Nock**, former sales manager of the Smithcraft Lighting Division of A. L. Smith Iron Company, makes his retirement home at 1376 S.E. 14 St., Pompano Beach, Fla. 33062. His family comprises four children and eight grandchildren. . . . Another Florida resident is **Henry C. Taintor**, 88 Harvard Dr., Ormond Beach, Fla. 32074, who retired last year as the design engineer of the Natural Gas Pipeline Company of America, Chicago, where he specialized on pipeline compressor stations. Hank keeps busy in local church activities and with the Daytona Squadron of U.S. Power Squadrons. He and Ola plan to attend the reunion and Alumni Day.

Several years ago, we wrote about the retirement of the Rev. **Williston Wirt**, one of the four ministers in the Class of '21, who had most recently built and served as pastor of the Pearl Harbor Memorial Community Church. When his reunion mail was returned, we lost a three-week running battle with the post office to have it forwarded. We gave up and wrote to his colleague, the Rev. Susumu Yamane, pastor of the Ewa Community Church in Hawaii, who promptly gave us Will's address in a total time both ways of five days. In a cordial letter from his home at 694 Priscilla Way, Claremont, Calif. 91711, Dr. Wirt's comments were: "Anyone who pursues his objective with the tenacity you devoted to penetrate the obfuscation of the San Jose post office forwarding department deserves a Certificate of Merit, which I may forget to enclose, but should. I spent a year at the address you used, received mail there and left forwarding instructions. I could write a book about the trouble I have had with mail addressed there. Yours is one of the long list of snafus attributable to poor service rendered by that P.O. Having been in Hawaii for six years, we spent 1962 in San Jose to be near our three grandchildren, whom we had seen only on brief trips to the mainland. They are the children of our older son, Eliot, a graduate of San Jose State, Whittier and San Francisco State Colleges, who teaches mathematics in the City College. Our younger son, Williston, Jr., was graduated from the University of California, Berkeley, and San Francisco State. He is not married and teaches biology in Kodiak, Alaska. I matriculated at San Jose State during 1962, took 30 units of librarianship and emerged with a librarian's credential. In 1963, we retired to Claremont, joining the colony known as 'Pilgrim Place,' made up of retired ministers, missionaries, YM and YW veterans. There are 300 of us happily enjoying the fellowship of this college community 40 miles west of Los Angeles. Most of us are Congregationalists, but a quarter are from other denominations, as we don't want to be 'ingrown.' One of my close friends here is Dr. Raymond B. Blakney '16. He taught in China, was president of Olivet College and also Pierce College in Athens, Greece. His son is a missionary teacher in Salisbury, Rhodesia. Since retirement, we have satisfied our yen for the sights of Europe by spending seven months on a camping trip through most of the countries, including two weeks in Leningrad and Moscow. We also had a five-month interim pastorate in Ewa, Hawaii, when Rev. Yamane went to Japan on a sabbatical. I work part time as a Professional Substitute at the Pomona Public Library, which moved into a \$1.4 million building last fall. It serves an area of 350,000 people, but 10,000 are moving into this valley every month and a two million population is anticipated by the turn of the century. I don't expect to be able to join you for the reunion, but I deeply appreciate your interest in the wandering members of our Class and the way you keep in touch with all of us, even after 45 years have gone by." Will was a member of Theta Chi at Technology. He



later attended Babson, the University of the Pacific and the Pacific School of Religion, earning the B.A., M.A., B.D. and D.D. degrees. He has been pastor of five churches in California, Oregon and Hawaii, besides serving as lieutenant colonel on active duty in the Chaplain Corps during World War II. For many years, he was Western Regional Chaplain of the Civil Air Patrol and member of its Chaplain's Board. He is a member of the Claremont University Club, past president of the Rotary Club of Eugene, Ore., past director of Rotary Club of Pearl Harbor and a holder of the Silver Beaver of the Boy Scouts of America. Thanks for your fine letter, Will.

Maxine and your Secretary enjoyed a delightful lunch at the Ramsey Golf Club and a most pleasant afternoon at their home, 224 Richards Rd., Ridgewood, N.J. 07450, as guests of Betty and **Sumner Hayward**. Sumner is well along the road to complete recovery from surgery earlier this year and Betty is making full use of her newly completed "office" in what had been the sunparlor, having had acceptance of a most interesting magazine article the day we went there. We have since seen Sumner again at the April meeting of the M.I.T. Club of Northern New Jersey and still more recently had a phone call following his return from Boston on a trip to see his recently-widowed sister. Since his appointment by Class President Ray St. Laurent as Chairman of the '21 Nominating Committee, he is in process of getting his committee in operation before he and Betty leave for a month's tour of England and Scotland, so scheduled as to get them back in time to attend both the reunion and Alumni Day. . . . You should by now have all the details of the four-day reunion in Groton, Conn. We have just received data on Alumni Day on campus in Cambridge and the special events for reunion classes only on the Sunday which precedes it. Following our last '21 reunion function, luncheon at Groton on Sunday noon, members of the Class will make their way to Cambridge. If you are not driving, arrange with the Reunion Committee to have someone take you in his car to Cambridge. We register between 5 and 8 p.m. on Sunday for our dorm accommodations (courtesy of M.I.T.) at the East Campus dorm office and will be assigned rooms in that area. At 6 p.m. on Sunday, we go to the Stratton Building (the new student center on Mass Ave., where the old "Tech Block" used to be) for the dutch treat reception and dinner for Corporation Chairman Jim Killian '26, President Jay Stratton '23 and President-elect Howard Johnson. Dinner is scheduled for 7 p.m.; \$6 per couple covers both reception and dinner. Early Monday morning, we register for Alumni Day in the Rogers Building lobby and can then select from a wide group of events, including: Management seminars at the Sloan School; N.A.S.A. displays; Science Teaching Center displays; Civil Engineering and Food Technology displays; a sketchpad demonstration of a computer. A half-hour memorial service will be held in the Chapel at 11:15 a.m. for those who departed us this year. By all means, see the Chapel if you

haven't already. Buffet luncheon in the Great Court at noon is the big event of the day. This time, it will not only include President Stratton's report on the state of M.I.T., but also a surprise presentation commemorating Technology's move from Boston to Cambridge 50 years ago. In the afternoon, the events include: A freshman seminar, with Dr. Edgerton; "Birth and Care of a City" (Boston), illustrated with slides by Professor Adams; demonstration of a computer classroom by Professor Biggs. Cocktails on the green outside of Kresge and dinner (no speeches!) in Rockwell Cage will precede a stellar evening program in Kresge Auditorium and the adjacent Stratton Building, rumored to include Bob and Ray, the Glenn Miller Orchestra and dancing. We are indebted to helpful Secretary Fred Lehmann '51 of the Alumni Association for this news.

As we prepare these notes, Class President **Raymond A. St. Laurent** has arranged a meeting in New York City which he will attend together with Class Vice-president **Irving D. Jakobson** and Class Secretary-Treasurer **Carole A. Clarke** and Kenneth S. Brock '48, representing the Alumni Association, for an information and planning session on various '21 affairs. Two days later, Helen and Ray St. Laurent will visit Maxine and your Secretary in Brielle and we are looking forward to several days of fun in the New Jersey shore area. Alex and **Munnie Hawes** will join us for dinner and an evening's miniature reunion. The Saints are on their way south for a vacation trip that is planned to include Williamsburg and the Norfolk azalea festival. . . . Alumni Secretary Fred Lehmann '51, has also sent data on some 200 regional chairmen of this year's Amity Fund, in which our Class Agents **Ed Farrand** and **Chick Dubé** as well as Sumner Hayward and **Chick Kurth** have been so active. . . . Through the kindness of a mutual friend, Ralph Redel, Jr., and our daughter, Ellie, we have a letter from **James R. Cudworth**, Dean of the College of Engineering, University of Alabama, University, Ala. 35486. Jim writes, in part: "My term as Dean is drawing to a close at the end of next year, as I shall meet the mandatory retirement age. I will have served the University of Alabama 43 years; I am the senior dean on the campus and the senior dean of engineering in the South. My faculty has increased to a hundred full-time people of professorial rank and over half have doctorates. Our sponsored research program amounted to \$1.5 million last year on the main campus alone—we have branches at both Birmingham and Huntsville. It has been an interesting life and an intriguing one, since dealing with young people and faculty never leaves a dull moment. We hope to get to the reunion but are uncertain as yet. Our younger son, Allen, Alabama and M.I.T. '53, may get his Ph.D. at Harvard Business School in June. Best regards." A recent phone message from Ellie relayed later news from Ralph that another letter from Jim would soon be here, announcing that he and Emily would definitely attend the reunion. Here's hoping, Jim.

Our son, Alfred, reports that he saw **Phil** and **Edna Coffin** in Glen Ridge, N.J.,

at Easter but didn't get an opportunity to talk to them. They still have a married son, **Philip T., Jr.**, in Glen Ridge, where they lived before moving to 344 Jefferson Dr., Pittsburgh, Pa. 15228. Four of the five Coffin children are married and there are 14 grandchildren. . . . **Alan L. Morse** is active in the Indiana Association of M.I.T. His retirement address is 3337 Pinecrest Rd., Indianapolis, Ind. . . . **Dr. Augustus B. Kinzel**, President of the Salk Institute for Biological Studies and also of the National Academy of Engineering, is an active supporter of V.I.T.A., the fast-growing Volunteers for International Technical Assistance, which is applying America's technical knowledge to the solution of everyday problems confronting all human levels in developing countries. Thanks to Professional Engineer **J. M. Dean**, Executive Director of the Iowa Engineering Society, Des Moines, we have a copy of the January, 1966, issue of the Society's publication, *The Exponent*, with an article from which the following are excerpts: "One of the nation's most eminent engineers, **Dr. Augustus Braun Kinzel**, delivered the second annual Sweeney Lecture at Iowa State University, Ames. During his stay in Ames, Dr. Kinzel also met with the Engineering College Cabinet and made brief remarks to a meeting of high school student advisors. He observed that his father, noted pianist **Otto Kinzel**, exemplified to him the 'art' of mathematics; his mother, a teacher of mathematics at Hunter College, taught the excitement and harmony of mathematics per se." We're glad to have a notation from Gus that he will join us at the reunion and Alumni Day.

Writing from a vacation stay in Sanibel, Fla., **Ralph M. Shaw, Jr.**, says: "We have just returned from a most enjoyable Fiesta in Mexico City, sponsored by the M.I.T. Club of Mexico. About 100 people attended, in addition to local members, the most distinguished being President and Mrs. Stratton, Mrs. Harold Lobdell and Dr. and Mrs. Max Millikan. Dr. Millikan, Professor of Economics at M.I.T., gave an address (open to people outside the visiting alumni) to a capacity audience in one of the local auditoriums. He is the son of the famous physicist, Dr. Robert Millikan of Caltech. The only other member of '21 was **John W. Shepard**, who was there with his wife. The Shepards live at 9 Day St., North Easton, Mass. Unfortunately, John acquired some virus and missed a good part of the festivities. The most interesting event was 'Noche Mexicana' at the McGann hacienda. The usual drinks, mostly rum and tequila, hot Mexican food, a giant 'Beaver piñata' loaded with presents, plus a dance band made up the entertainment. Many in attendance were dressed in traditional costume. This was an opportunity, rarely available to tourists, to meet the Mexican aristocracy. These are pure Castilians. The men are tall, well built; the women utterly lovely. They certainly rolled out the red carpet for us. See you soon." Rufe's letter to the editor in the March issue of the Review vents his spleen on the current "numbers game," wherein we are all being reduced to al-

phanumerics. We can add a couple of numbers to his already long list. There is our driver's license, C50871136102003, which somehow makes checks acceptable in place of more direct identification; for sheer nonsense, there is 226066505, which comprises the genes and chromosomes of the Class of '21,—Uncle Samuel's vigilant tax collectors carefully fondle it to swell useless files on non-taxable bank accounts, such as this one for meager '21 funds! . . . Remember the 4-H Club of '21 at M.I.T.? Hawes, Hayward, Hill and Huggins, all Course X, were always together in classes and, for a while, the national 4-H group was hard pressed for another name. We've found it difficult to spell the name of Munroe C. Hawes correctly during the last few years in our printed Class news; the gremlins which occasionally plague the Review staff, have been at it again. Difficult to explain to our neighbors, Alex and Munnie, how "Munroe" went out on our copy sheets and "Monroe" came back on the printed page. The little sprites somehow contrived to change to "Monroe" the listing on every one of the copies of the formal 1961 Alumni Register, which the careful Review editors use as a reference! May this year's revised Register be secure from these prankster's inroads! Alex and **Munroe C. Hawes** have returned from a six-week stay in Florida to welcome grandson Scott Munroe Dalton, born on March 17, 1966, to daughter Elizabeth and John Dalton. Daughter Aimee's son, Billy Brown, graduates from high school this year and has been named an alternate for admission to Annapolis. The Hawes family includes four children and seven grandchildren. Alex and Munnie will attend the reunion and Alumni Day.

A message from Edna and **George Gokey, Jr.**, on board the M. S. Oslofjord, cruising in Norwegian waters, says: "We're just finishing an exciting Mediterranean cruise. Exciting because we were caught in Syria during a recent revolt and had to 'hole in' at our hotel while they shot it out! Thus we missed seeing the Holy Land. Will see you and all of '21 at Groton. Best regards." The Gokeys are at home betimes at 98 Westminster Drive, Jamestown, N.Y. 14701. . . . From his home at Tetrastemma, Harmony Hills RFD 1, Havre de Grace, Md. 21078, came a fine personal letter in which **Dugald C. Jackson, Jr.**, says, in part: "Betty and I have hopes of seeing quite a number of Course VI-A men and their wives at the reunion. We have addresses for six who are not now listed as 'probable attenders' and I have written them, urging that they attend and, especially, to send in the questionnaire,—Buckner, Chilcott, Hartley, Rose, Wood and Woodbury. Just noted that Charlie Williams is not on the list; I'll write him also." Thanks a million, Dug. . . . **Dana E. Kepner**, 82 Jasmine St., Denver, Colo. 80220, writes: "When Jack Kendall and I sent cards from Pasadena to you and Ray a year ago, we both planned to attend the reunion. However, Mrs. Kepner and I have now decided to make our second round-the-world trip this year, and I'm sorry we can't make the reunion. We leave February 9 for Varese, Italy, to visit our daughter and her family,

who live there, but we're going the long way—via Tahiti, Samoa, Fiji, New Zealand, Australia, Djakarta, Bali and Istanbul. With our previous world trip, two each to Europe and Hawaii, one each to Alaska, Mexico, the Caribbean and South America, we feel we have pretty well covered the globe. As you might guess, we love to travel. We will have a visit with Marge and **Jack Kendall** in South Pasadena enroute to the South Pacific. Best wishes." We'll miss the Kepners and hope they'll make certain to attend the 50th! . . . We also wish to acknowledge most friendly personal letters and phone calls from Alumni Association Executive Vice-president Don Severance '38, Bill Sherry, Sumner Hayward, Saul Silverstein, Dug Jackson and Ray St. Laurent on reunion matters.

Today's television programs list the "College Sport Event of the Week—M.I.T. vs. Harvard in lacrosse." Top billing, no less, and to learn some of the reasons why, join your best friends on earth at our 45th Reunion, June 9 through 12 at the Griswold Hotel and Country Club, Groton, Conn. Then come with us on the trek back to Tech for Alumni Day, June 13, in Cambridge. Act fast and obey that urge to take advantage of an opportunity that isn't given to many to enjoy! You'll be mighty glad you did! See you there next week!—**Carole A. Clarke**, Secretary, 608 Union Lane, Brielle, N.J. 08730; **Edwin T. Steffian**, Assistant Secretary, c/o Edwin T. Steffian and Associates, Inc., 19 Temple Place, Boston, Mass. 02111

## '22

Just to show off, the Buffalo weather in mid-April is warm and sunny, the citizens are preparing their yards and planting flowers and some are preparing their beach homes on Lake Erie for an early start of a delightful summer season. Your Secretary has 450 beautiful slides representing efforts in Hawaii, Fiji, New Zealand and Australia. **Parke Appel** and Madeline will ask for equal time at our 1967 Reunion with their European pictures to compete with the international prize photos of **Oscar Horovitz**. Here's hoping that many of us get together this year at Alumni Day on Monday, June 13 to discuss the Big Party in June 1967, our 45th Reunion. . . . We proudly present and compliment **Fearing Pratt** and **Thomas Shepherd** who are National Chairmen in their respective localities of Hingham, Mass., and Portland, Me. It is noted that many of our Class have retired from these activities after carrying them for many years. . . . It was good to hear from **Sam Reynolds**, Vice-president, Sales, Great Lakes Carbon Corporation, as he follows his most active life in New York City. . . . We are sorry to hear sad news from **Dabney H. Maury**, of Sunnyvale, Calif. His wife, Jean, was buried in San Francisco early in March after almost seven years of recurring cancer. We most sincerely extend the sympathy of our Class to this family, including Michael, 16 and John, 13. May we echo the wish that both boys will be future students at

the Institute. . . . The sympathy of our Class is also extended to the family of **John F. Otis**, who passed away in January. He was a brother of former Mass. State Representative William F. Otis and resided in Alexandria, Va. We also send our sympathy to the wife and family of **Joseph Givner**, who in recent years had been lecturing on retailing and packaging at Columbia University and M.I.T. Previously he had joined R. H. Macy and Company and headed the newly established Macy Corporation buying office. During World War II he served in the Navy Department as a dollar-a-year consultant. We must also report with regret the passing of **Albert S. Rairden** of West Boylston in October and **L. Emerson Spear** of Pasadena, Calif. in March. Our sympathy is extended to their families.

Among the new addresses received are those of **Benjamin W. Thoron**, Washington, D. C.; **Dudley Tait**, Piedmont, Calif.; **Richard Donnelly**, Chatham, Mass.; **Nathan Weed, Jr.**, Salisbury, Md; Col. **Charles Thomas-Stahle**, City College, Pa; **Waller V. Morgan**, Pompano Beach, Fla. . . . When thinking over Alumni Day and the students on Campus, the start of a poem comes to mind: "Most students picture an Alum/As rather fat and pretty glum,/Very old, without much hair/On the farm with the old grey mare." Did you ever think that our Class might some day be getting into that category? Well anyway, in another 10 years! So, be sure to come to Alumni Day while you are still young!! Most sincere wishes for good health to you.—**Whitworth Ferguson**, Secretary, 333 Ellicott Street, Buffalo, N. Y. 14203; **Oscar Horovitz**, Assistant Secretary, 33 Island Street, Boston 19, Mass.

## '23

There is an interesting article, "Who Will Teach the Teachers?" in *Current for January 1966* by Professor **Nathaniel H. Frank**, former head of the Physics Department, a member of the Institute's Science Teaching Center and an early contributor to the Physical Science Study Committee. Dr. Frank is now the director of the Cooperative Program to Improve the Undergraduate Preparation of Prospective Teachers (ESI). . . . *Inland Printer/American Lithographer for January 1966* carries an interesting article, "How Management Must Cope with Changes," by **Edward McSweeney**, a nationally known management consultant, management advisor to Printing Industries of America, Inc. . . . A letter of April 4 from (**Doc**) **Roscoe H. Smith** enclosed newspaper announcements of the death of **Hall Kirkham** on April 1. Hall had participated in the question and discussion period, at dinner in Cleveland, Ohio, on March 28, in which a small group was connected by telephone to the Alumni Council Meeting in Cambridge. As an undergraduate Hall participated in many activities, one of these being the Editor-in-chief of *Technique*. The clippings report that he was a pioneer in the development of hydraulic components



and an executive and a director of the New York Air Brake Company for four years before retiring in 1955. He died at his home, 18301 N. Park Blvd., Shaker Heights. He founded the Hydraulic Equipment Company, manufacturers of hydraulic components for material handling and earth moving machinery, in 1936. The company was merged with the New York Air Brake in 1951. Mr. Kirkham also was a former vice-president of the Central United Company, now a branch of the Central National Bank, and a former chief executive officer of the Colson Company of Elmira. He was a former trustee of Hawken School, the Salvation Army, Cleveland Center on Alcoholism, Medical, Mutual and was a vestryman of St. Paul's Episcopal Church of Cleveland Heights. He was a lover of outdoors and an enthusiast in hunting and fishing. Mr. Kirkham was graduated from Phillips Andover Academy before attending M.I.T. and was a Navy veteran of World War I. Surviving are his wife, Jeannette; two sons, George G. and Walter R.; three grandchildren and two sisters.

The Alumni Office advises of the following changes of address: **Walter Dietz**, R.D. #1, Pennsburg, Pa. 18073; **David M. Houston**, 445 Pinehill Road, Hillsborough, Calif. 94010; **Howard B. Koppel**, 419 No. Oakhurst Dr., Beverly Hills, Calif. 90210; **Pierre F. deReynier**, Apache Country Club Estates, 721 Saranac Ave., Mesa, Ariz. 85201; **Erwin G. Schoeffel**, 148 Wilson Hill, Massena, N.Y. 13662. —**Forrest F. Lange**, Secretary, 1196 Woodbury Ave., Portsmouth, N.H. 03801; **Bertrand A. McKittrick**, Assistant Secretary, 78 Fletcher St., Lowell, Mass. 01852

## '24

The big 18th annual M.I.T. Fiesta in Mexico has come and gone, and '24 was well represented. At the last minute **Bill Blaisdell** had to make a trip to the hospital, so the Blaisdells didn't make it. But the **Cardinals** were there as was **Joe Mares**, **Austin Cooley**, **Ru Torres Saravia**, and of course our two local boys, **Nish Cornish** and **Jack Nevin**. From all reports it was one of the best ever, with some 80 people from the States in attendance. The Cardinals went over to Acapulco, then up to San Diego for a couple of weeks before returning home. . . . Roaming around the country to attend the series of Alumni Fund meetings held every spring, inevitably a few '24 men put in an appearance. In Wilmington it was **Ted Taylor** who lives in nearby Newcastle. He is very involved in Power Squadron affairs. And at a meeting at Endicott House, the Institute's fabulous country estate in Dedham, **Paul Schreiber** showed up. He is living in Wellesley Hills, having been transferred to Dow Chemical's Boston office, as previously reported. . . . Prof. **John H. Skinkle**, for 27 years a member of the faculty of Lowell Technological Institute (it used to be Lowell Textile) has been named head of textile chemistry. At one time John was chairman of the faculty,

and for some years he has been in charge of their graduate program in textile chemistry.

"New features and improvements in office equipment are sprouting almost daily under the pressure of a dynamic technology, presenting even the most savvy customers with a bewildering variety of goods. What's more, the industry's legion of salesmen would keep purchasing agents busy 24 hours a day, if they would sit still for it." That's the lead paragraph of a Business Week story on **Art Kallet's** Buyers Laboratory, Inc. of New York, a product evaluation service on a consultant basis "to take off some of the heat." We've told you about it before, but this piece gives some indication of the success Art is having. He now has some 1,500 customers including General Motors, General Mills, and John Hancock. He is quoted as saying: "If our job weren't done with complete honesty it wouldn't be worth a damn. Like Caesar's wife, we have to be above suspicion." . . . Another classmate was featured recently in a national magazine, *Mechanix Illustrated*. Haven't heard much about **Otto Koppen's** Helio plane, "the world's safest plane" recently, but here it was. There are two models now, a 260 hp Helio Courier, and a 295 hp Super Courier. They're not cheap (\$35,000 and \$39,000), but they certainly have remarkable characteristics. The Courier, with pilot and five passengers, can take off in 70 yards and land at 33 mph, while a power-on stall is almost impossible. They have been flown out of some of the most improbable places such as parking lots, glaciers and strip mines. A prototype, now hanging in Smithsonian, took off from a Harvard tennis court! You will remember Otto as one of the founders of the M.I.T. Gliding Club in our day. He's been on the faculty ever since until his retirement last year.

Speaking of retirements, they continue to come thick and fast. Last September **Myron Freeman** retired from Combustion Engineering. He continues to live at his home in West Hartford, Conn. . . . In March **George Riegl** retired from U.S. Steel and headed for Carmel, Calif. . . . And a month later **Bob Dehlendorf** closed his desk at General Motors and went in the same direction to La Jolla. . . . This August **Russ Ambach** will have reached Atlantic Refining's mandatory retirement age. . . . There's one more that is of particular interest to your Secretary—on July 1 the Alumni Fund will have a new director, and I shall retire to an unhurried life with the birds and the bees. After all the glowing accounts of the joys of retirement that have come from so many of you, at last I shall get a chance to try it at first hand. . . . A year ago we told you of the visit **Dave** and **Myra Evans** had with **Luis Ferre**, and of Luis' art collection which was soon to be housed in a fine new building. Now comes a terse news item: "Mr. and Mrs. Luis Ferre, Ponce, Puerto Rico, present city with \$4,000,000 Ponce Museum of Art and 325,000 paintings initially costing \$1,000,000." Sounds as though an extra 0 or two had been added to the number of paintings, but in any event it's a marvelous and impressive act of generosity.

Each year 45 or so new men come to M.I.T. from industry for a year's advanced management study as Sloan Fellows. The new listing for the forthcoming school year appeared recently. It included **Robert M. Ilfeld '44**, son of **Max** and **Bertha**. . . . And that's it for now. Alumni Day at M.I.T. is coming up soon on June 13. Lots of innovations this year. If you can make it, do. It should be fun. —**Henry B. Kane**, Secretary, M.I.T., Room E19-439, Cambridge, Mass. 02139

## '25

A newsy letter from **Henry Sachs** provides information which it is expected all members of the class will find interesting. First of all, Henry informs me that his daughter, **Peggy Gross**, presented his first grandchild, **David**, born on March 22, 1966. He then goes on to describe his many and varied activities which can best be told in Henry's own words, and therefore the following is quoted. "The older I get, the more varied are my interests. Outside of attending to my general insurance business, I have become very interested in what is generally known as 'charitable work.' For 15 years I have been a Trustee of the Educational Alliance (presently as a vice-president). This is one of the oldest and most progressive neighborhood houses in the country. It is also one of the most important teaching group work agencies. Through this, I became interested in graduate social work education and the steps that need to be taken to remedy the critical shortage of social workers. Thus, I am a board member of the Social Work Recruiting Center of Greater New York, have served on the National Commission for Social Work Careers. Most important, perhaps, is my work with the Council on Social Work Education, where I have been promoted from board member to Secretary of the organization. The CSWE, for instance, accredits all graduate schools of social work in the United States and Canada. In this connection I come into contact with most Deans of Schools of Social Work and most top officials of the Department of Health, Education and Welfare. I have testified before Congressional Committees and, of course, meet with many lay and professional leaders in the voluntary as well as the governmental field. In addition, I am serving on the Development Committee of the 13th International Congress of Schools of Social Work that will meet in Washington this summer. I also serve on the Committee on Social Legislation of the Federation of Jewish Philanthropies of New York and serve on several scholarship boards. Lastly, I am a member of the President's Advisory Committee of the Graduate School of Social Work of New York University. I never could quite shake my interest in National Defense and am a vice-president of the New York Post of the American Ordnance Association. On the epicurean side, I am a member of the *Confrérie des Chevaliers du Tastevin*—in other words, a lover of good food and the wines of Bur-



gundy. Another hobby of mine is travel combined with photography. I enjoy visiting beautiful buildings, seeing fine works of art and studying bygone civilizations. Last year we visited Mexico and I was most fascinated by the mystery and the beauty of the Mayan ruins in Yucatan. The previous year we spent considerable time in Crete admiring the Minoan civilization, but also revisited the Greek mainland, Sicily, and took in a few days in Vienna and Budapest. This spring we will explore some new-to-me places in Portugal, the magnificent cathedral in Santiago de Compostella (Spain), the art museums along the Riviera, and the treasures of Provence. I also expect to spend a week or so in London (partially on business) and end up with a week in Germany, including a trip to East Berlin."

A small 1925 Reunion took place at the March meeting of the Alumni Council. **Clarence Thulin**, who has recently joined the Council, attended his first meeting; and, in addition, **Ed Kussmaul**, Past President **Fred Greer**, and present President **Sam Spiker**, as well as your Secretary were present. **Ave Stanton**, the other 1925er on the Council, was returning from a vacation in Florida and missed the meeting by only a day or so. . . . Your Secretary had a short visit and a pleasant chat with **Max King** a few days ago. Max was in Boston attending a technical meeting and was kind enough to take time out and drop in for a chat. . . . Word also has reached us that **Ed Harris** represented M.I.T. at the convocation commemorating the Seventy-Fifth Anniversary of Randolph-Macon Woman's College, Lynchburg, Va., on Saturday, March 12, 1966.—**F. L. Foster**, Secretary, Room E19-702, M.I.T., Cambridge, Mass. 02139

## '26

The June issue in a reunion year is tough to write—it comes out so near to the time you are here that the impulse is why write anything, just tell them when they are here. That would break the record of never missing an issue which probably would be a good idea. We are not out for records unless there is something to tell. There seems to be. **Bill Sessions** dropped us a note recently with a clipping about Dave. Here's Bill's note: "George, here's news of another of Dave's post-retirement activities. Hope to see you in June." The clipping states, "Four prominent men were named to the study commission that is to investigate the possibilities of closer cooperation between Western Reserve University and Case Institute of Technology. They are: Dr. Charles W. Cole, former president of Amherst College and former U.S. ambassador to Chile. Dr. Harold L. Hazen, dean of the graduate school of Massachusetts Institute of Technology. Milton Katz, professor of law at Harvard University. **David A. Shepard**, recently retired vice-president of the Standard Oil Company of New Jersey. The commission's job will be to decide how extensive

the cooperation should become and whether actual merger of the institutions would be advisable." Looks as though Dave has cut out some worthwhile projects to utilize his "spare" time.

Another classmate who comes out of the rocks of Arizona on an annual basis has written us in a way we wish more of you would do; this was on his Christmas card which we saved for an occasion and this seems to be the occasion. "Dear George: As last year's promulgator of a letter-a-year-to-the-Secretary I should come through with something this year. You might give the classmates a yearly choice: One letter, one card, or a cablegram from all those in Hanoi . . . As for me, I'm still an Arizonian as time allows, on a small, 80 acre ranch with no white faces, or even a pig, which is pretty sad with bacon getting to a \$. Good life, anyhow, and I keep in trim riding, riding a Land Rover, that is. Got back recently from a 7000 mile asbestos safari to the Yukon. Wife's going to give me an electric massage machine for Xmas. Until then I have an automatic rocking chair with an over-stuffed seat. The family is scattering a bit with the boy in electronics for the Navy. The girls at 12 and 14 enjoy telling the world that I'm not their grampaw, just a slow starter, and add my age just to cinch down matters. Oh, well . . . Hope you have a nice holiday, George. **Bill Millar**."

A classmate who will have the long distance reunion prize in the bag has been popping up in print a great deal recently.

## 40th Reunion

I mentioned a write-up about him in Time within the past year and now he has made Fortune in the March issue. The heading of the article is "An M.I.T. Man in Poona." I'll not quote the entire article but since he has just cabled Jim Killian his interest to attend our reunion I think we should have a fair amount of the Fortune story so I'll quote a bit more than usual. Here goes: "One of **Shantanu Laxman Kirloskar's** favorite mannerisms is to slap his right thigh and chirp 'Let's go!' It aptly sums up the spirit that has made Kirloskar one of India's most aggressive businessmen. Now 62, he has put together the country's largest privately held complex of engineering companies, a cluster of nine separate concerns with assets of \$32 million and sales of \$64 million. The Kirloskar group has factories in seven Indian cities, employs 13,000 workers, and makes an impressive variety of capital goods for farm and industry. Kirloskar pumps, powered by Kirloskar engines, irrigate India's paddy fields. Kirloskar lathes hone new machine tools. 'Everything we make is vital to the development of the country,' says the boss. Kirloskar's father was a schoolteacher who went into business after he was passed over for promotion. He made enough money from manufacturing iron plows and other farm implements to educate his son abroad. He sent the boy, not on the well-trodden path to Oxford and Cambridge, but to M.I.T. because he considered the U.S. more advanced in technology than Britain. After graduating

in 1926, Shantanu went into the family business and quickly redesigned its more complicated products, a peanut sheller and a sugar-cane crusher. Then he got the company to branch out into centrifugal pumps, diesel engines and machine tools. In 1946 he added an electric-motor factory to take advantage of the beginnings of rural electrification in India. A blunt man with an infectious smile, Kirloskar rules his expanding empire with a light hand. He exercises direct control only over one company, **Kirloskar Oil Engines** in Poona, up to now his biggest enterprise. Deputies, usually relatives, run the other eight firms. He often visits them, hopping about the country in a Piper Apache, which he likes to fly himself—though he won't hazard a takeoff or a landing. Kirloskar is an outspoken critic of India's experiment with socialism which he feels is doomed to failure. Last year, as president of the Federation of Indian Chambers of Commerce and Industry, he urged the government, with some success, to drop some of its controls over private businesses. But despite these controls, and steep taxes, which he complains leave him too little money to reinvest, Kirloskar has done well. His companies have been growing by about 20 percent a year, and their net return on invested capital ranges up to 50 percent. 'We have made money in spite of the planners,' he says, 'not because of them.' When **Gordon Spear** retired from Fisher Body early this year he took a trip around the world and one of the highlights was a visit to "Sandy" in India. **Chet Buckley** has also been in contact with "Sandy" and between the two they seem to have talked him into coming to the reunion. I wrote Sandy that he had but one possible contender for the long distance prize. **Stark Draper** could speed up his work on the Apollo project and come barreling into the reunion in a space suit from the moon! It will be wonderful to see all of you at about the time this issue is published so instead of our usual "cheerio" until next month we say, "Welcome Home Class of Twenty-Six."—**George W. Smith**, Pigeon Cove, Mass.

## '27

There is beginning to be a bit of a pattern here. The Institute sends me notices of change of address and there are more now that read, for instance, "moved from Pennsylvania to Florida." The one about **Chet English** reads "moved from Lyndhurst, Ohio to Apt. 3, 4511 NE 21st St., Fort Lauderdale, Fla. 33308." It seems a fair assumption that Chester has at least partially retired. If this is not the case, I'll probably hear from him. Over the years I have noticed that the most likely way to get a letter from a classmate is to say something in the notes that isn't quite so. As early as 1939, Chet was the manager of GE's glass works at Niles, Ohio. As recently as 1963, he was in Niles, so lamps have apparently continued his specialty. . . . Similarly, **Leland D. Whitgrove** has moved from McLean, Va., to

702 Country Club Road, Ojai, Calif. 93023. Captain Whitgrove took his master's degree in course XIII-A (Naval Construction and Engineering) and has had a lifetime career in the Navy, with assignments, to our knowledge, in Portland, Ore., Astoria, Ore., Brooklyn, Washington, D.C., Annapolis, and there must have been a lot more.

There was a picture of **Sam Hershey** in a recent New Bedford, Mass., Standard-Times, complete with moustache and goatee. I knew Sam pretty well in undergraduate days, but my manila folder labelled with his name on it hadn't given a hint of his whereabouts until the receipt of this most interesting clipping. He was in Course IV and finished his formal education at the Pennsylvania Academy and the Boston Museum School. He has taught at the Cambridge School of Architecture and Landscape Architecture and at Harvard University. Now he is dean at the Rhode Island School of Design, head of the faculty, and a noted painter. In a recent speech, here are some of the interesting things he had to say: "Don't leave art in the museum! I just can't be content with the idea that art is way out there somewhere. Everything we see, to a greater or lesser degree, has some element of art in it. Look around you any time during your daily living and think that someone, somehow has made the decision of how this will look. Scientific and industrial expediences have seriously endangered our aesthetic sensitivities . . . We must educate our young to taste and discrimination. Art should be not merely an elective but just as much a part of the curriculum as the three R's. Certainly our young should learn how to read, but they should also learn how to see."

A listing of those alumni actively working on Alumni Fund solicitation indicates that classes younger than ours do most of the work, but **Glenn Jackson** is in charge of solicitation in Iran. . . . On the 1966 Alumni Association annual ballot, **Dick Hawkins** is nominated for 1927 Class Representative on the Alumni Council, to serve a term of five years. . . . Through January 14 of this year, 1927 had raised \$250,960 toward its goal of a \$400,000 40th reunion gift. When you read this, we will have one year and \$149,000 to go.—**J. S. Harris**, Secretary, Masons Island, Mystic, Conn. 06355

names and addresses from A through G. These follow: Arnold A. Archibald, Co-raopolis, Pa.; Cole A. Armstrong, Morristown, N.J.; Elbridge L. Atwood, N. Abington, Mass.; George E. Bass, Bridge-ton, N.J.; Dean E. Batchelder, LeHabra, Calif.; William Bendz, Los Altos, Calif.; Maurice C. Beren, Leominster, Mass.; George A. Bernat, Sarasota, Fla.; Carl J. Bernhardt, Hamburg, N.Y.; Wolcott S. Bissell, Newington, Conn.; D. Yancy Bradshaw, Larchmont, N.Y.; A. Fitch Briggs, Beaumont, Texas; Vernon S. Brown, Florence, Ala.; Henry C. Bunt-schuh, New Hyde Park, N.Y.; Homer A. Burnell, Jr., Chicago, Ill.; John J. Campo-basso, Lexington, Mass.; William H. Carlisle, Jr., Cambridge, Mass.; Christopher M. Case, Willimantic, Conn.; John W. Chamberlain, Cambridge, Mass.; George I. Chatfield, Fitchburg, Mass.; Kenneth A. Clark, LaGrange Park, Ill.; Dudley F. Collier, Billerica, Mass.; Herbert P. Day-ton, Channelview, Texas; Victor J. De-corte, Antwerp, Belgium; Albert S. Dem-pewolff, New York, N.Y.; Roland D. Earle, Hollywood, Fla.; Carl Feldman, Sharon, Mass.; Newton S. Foster, Ruther-ford, N.J.; George E. Francis, Jr., Delray Beach, Fla.; Donald S. Fraser, Pittsburgh, Pa.; Carney Goldberg, Boston, Mass.; Richard B. Goble, Cincinnati, Ohio; Al-bert J. Gracia, Akron, Ohio; and James D. Green, Chicago, Ill. Jim would like to re-mind everyone that it is not too late to join this committee of dignitaries. You don't even have to dig out the postcard that was sent to you last year; simply send Jim a note saying that you are will-ing and able to do something.

The Donovan notes continue: "Our old friend **Dave Olken** was in Saturday morn-ing having some work done and we talked. Dave told me some of his troubles and I told him some of mine. Dave wanted to know what I thought of future economic conditions and, of course, I was glad to oblige and tell him. . . . The other day I had a telephone call from **Bill Gorfinkle**, Course V. Bill and I had the same banker; and unfortunately for both of us, the fel-low dropped dead on the golf course, so Bill called to give me this bit of bad news, since there was a newspaper strike in Boston and news was available only through somebody thoughtfully letting you know. Since then Bill and I have been talking quite a lot about some bank-ing problems, interest rates, getting enough money to do business, and the general state of the supply and demand situation. A few months ago I saw Ella and Bill at a big to-do when the new life sciences building at M.I.T. was properly dedicated. . . . **Homer Burnell**, Vice-president of the Continental Illinois Na-tional Bank and Trust Company, Chicago, was thoughtful and wrote me a letter say-ing he would be in Boston on a certain date, and he graciously invited me to luncheon. We talked. I asked whether he and Mr. Johnson were going to keep this economy going strong. I can't remember that he gave me a straight answer. Homer has charge of Wisconsin, Michigan and Ohio for his bank and does a bit of travel-ling. He was just back from a two weeks skiing trip to Jackson Hole, Wyoming, and reported that Bud Grey was in New Zea-

land at that time on a bow and arrow hunting trip."

A letter dated April 5, 1966 from **Gil Toone**, Allied Chemical Corporation, 1051 South Park Ave., Buffalo, N.Y., to Jim reports a tragic death. "I know you will regret reading the enclosed clipping as much as I did. I had not known that Carl was sick, so it was a shock to see the notice in tonight's paper. I frequently saw Carl and stopped to talk a few minutes, when I was out letting the dog take me for a walk. I hadn't run into him lately but figured he would be out in the yard again as soon as the weather warmed up. We lived only a couple of blocks apart. We had missed seeing Ethel go by the house on some of her frequent walks, but hadn't thought too much about it. I am sorry I have only this sad news to send but thought you and other classmates would like to know."

The news clip follows: "**Carl J. Bernhardt**, 61, an engineer with the State Health Department for 35 years and a key co-ordinator of water-pollution control in western New York, died Monday night (April 4, 1966) in Buffalo General Hospital. He had been ill for five weeks. His home was at 85 Highland Ave., Hamburg. Mr. Bernhardt had been director of public health engineering in the department's Buffalo Region office since 1951. He joined the regional office in 1931 as a junior engineer. From 1937 to 1951 he was regional engineer in Jamestown. A Buffalo native, he graduated from La-fayette High School and received his degree at Massachusetts Institute of Tech-nology in 1928.

"He was a director and past president of the State Water Pollution Control Associ-ations. Mr. Bernhardt was a member of SS. Peter & Paul Church, Hamburg, and its Holy Name Society and the Rotary Club of Hamburg. He was also a member of the National Society of Professional Engi-neers, the Erie County Chapter of the State Society of Professional Engineers, the American Water Works Association, the American Society of Sanitary Engi-neers, the American Society of Civil Engi-neers and the American Public Health Association. Survivors are his wife, the former Ethel F. Wilson; a sister, Mrs. Mary Broderick, and two nephews.—**Hermon S. Swartz**, Secretary, Construc-tion Publishing Company, Inc., 27 Muzzey St., Lexington, Mass.

'28

This month we are indebted almost en-tirely to **Jim Donovan** for the contents of this column. We should sign his name at the bottom as treasurer of the class and chairman of the general committee of our 40th-year reunion. He sent along a re-union letterhead, on the back of which are listed over a hundred names of those members of the class who have indicated that they will take an active part in re-union affairs including solicitation organ-ization for the 40-year gift. Because this list is too long to be published in one issue of these notes, we will use in this issue

'29

Writing for the June issue brings to mind that Alumni Day is just around the corner—Monday, June 13—and advance notice of the program shows promise of an exciting day, especially since this is the celebration of M.I.T.'s half century in Cambridge. Will we be seeing you there? . . . We have news items from the Alu-mni Office. **Alfred H. Hayes** of Whiting, Ind., has been appointed to the City Plan Commission. Alfred has been with the American Oil Company since 1930 and is director of Technical Service and Operat-ing Procedures in their Manufacturing De-



partment in Chicago. . . . **Heinn F. Tomfohrde Jr.**, Los Angeles, has been appointed Group Vice-president in charge of manufacturing, marketing, transportation, and supply activities at Tidewater Oil Company which he joined in 1929. For the past two years he has served as Vice-president and general manager of the International Division. . . . We are a little out of season on this item, but a December newsclipping in the Boston Traveler carried an illustrated story about the **John J. Faheys** of Boxford, Mass. The Faheys have been hosts to very unique "Bowl Parties" every New Year's day for the past 30 years in order to enjoy the entire day with their friends and neighbors watching all the football games on TV while celebrating the holiday. This originated shortly after they were married when they invited friends in to gather around the radio to listen to the games. The article included some excellent views of their charming Royal Barry Wills home where they have settled after having lived all over the United States. John Fahey is vice-president and general manager of the Haverhill Gas Company and president of the Greater Haverhill Foundation, Inc.

Also from the Alumni Office is a handful of address changes which may be of interest. **Bernard B. Brockelman** has moved from Islington to Wetswood, Mass.; **William Cline, Jr.**, from Coopersburg to Quakertown, Pa.; **Sidney Darlington** from Murray Hill to Gillette, N.J.; **Laurence D. Luey** from New York City to Syosset, N.Y.; **V. G. Miskjian** from New Orleans, La., to College Park, Md.; **Henry S. Muller** from Glen Ridge, N.J., to Belmont, Ohio; **Neil C. Ross** from Pittsburg to Concord, Calif.; **G. Edward Sakrison** from Concord to Knoxville, Tenn.; Dr. **John H. Talbott** from Buffalo, N.Y., to Chicago, Ill.

The Alumni Association has issued a list of alumni who are regional chairmen for the Alumni Fund this year, some 200 of them. We find the Class of '29 represented in Barrington, R.I., by **Theodore Alexieff**. Also, a report from K. S. Brock regarding reunion gifts shows that the Class of 1929 has contributed \$115,279 as of April 13, 1966. . . . We were very happy to be of assistance to John Pratt (M.I.T. '30) when he inquired of the address of his brother Sigma Chi, **Hunter Rouse**, having seen his name in these notes. . . . **Bill Baumrucker** promises to tell us all about the fun he had at the M.I.T. Mexican Fiesta, which he says is a very worthwhile event to experience. . . . Hope to see many of you on Class Day.—**John P. Rich**, Secretary, P.O. Box 503, Nashua, N.H.

## '30

As in prior years, there has recently been a vernal upsurge in material for the notes. This is a fortunate circumstance. Since we are leaving for Europe in a few weeks, there will be no '30 Notes in the July issue; this month's items will have to do double duty. . . . As previously reported, **Jim Dadakis** has moved from the

radio business into teaching and seems to have found his new career exceptionally rewarding. To use his own words: "I gave up the buy-ways (sic) of commerce in Dollar Radio about five years ago, and went back to Columbia for a Masters, because I felt too young to sit around and wait for hardening arteries, and entered the broad highways of academe. Since then life has been one continuous ball. Even though it keeps me constantly busy, teaching has satisfactions that can never be found in just accumulating money. This summer I am going to Michigan on an NSF in advanced Physics." Jim's older daughter Phoebe graduated from Duke and received an M.S. at Georgetown's Foreign Service Institute. She is married, lives in Washington, and has a daughter Susan who is "an outstanding combination of Irish charm and Greek intelligence." Daughter Susan who is also married, graduated from Cornell and is currently working on her Ph.D. in biometrics at Stanford. Son Sophocles is a junior at Cornell.

As reported in the November '62 Notes, **William E. (Cul) Cullinan** is with the F.A.A. and at that time was the first Airport Director at Dulles International in Washington. Since then he has been chief of the Airport Division in N.Y. and in September '65 moved to Boston as assistant area manager for Northeast and upstate N.Y. Along the way he has acquired three additional grandchildren for a total of seven. . . . Harvey Chapman is chief engineer in charge of development for the Transportation Equipment Division of Evans Products Company in Plymouth, Mich. His division manufactures freight cars and miscellaneous devices for use therewith. His son Harvey, Jr., attended Ferris Institute and is now an insurance adjuster with General Adjustment Bureau. Harvey says he occasionally sees **George (Leo) Kloote** who is Chief Engineer of Evans' Haskellite Division. . . . **Bernie Canter** is practicing medicine as a G.P. in Springfield, Mass., and is on the medical staff of Wesson Memorial Hospital, as well as a part-time school physician. His daughter Lois is a senior at Skidmore majoring in psychology and his son Mark is a freshman at B. U. planning to major in political science. . . . **Dave Stanley** has retired and now does freelance writing on air transportation economics. One of his articles entitled "Is Air Mail Subsidy Justified?" appeared in the November '65 issue of the Public Utilities Fortnightly. His two daughters are both married, Jane to an organist and Marcia to a professor at Northwestern. . . . **Theodore Criley** is practicing architecture in Claremont, Calif., as senior partner of Criley and McDowell. His firm designs and supervises construction of college buildings, churches, schools and public buildings, and in 1957 and 1960 won Honor Awards from the Church Architecture Guild. He also lectures on architecture at Scripps College and is president of the local Democratic Club and director of the Claremont Civic Association. The Crileys' older son Donald, attended Pomona, Occidental and University of California and is now a mathematician in Aerospace Industries. Young-

er son Michael attended Stanford, Stanford Medical School, Johns Hopkins and is now assistant professor of cardiology at J. H. . . . **Jack Bloom** has retired from his job as an examiner in Division 62 of the Patent Office and is now living in Bonita Springs, Fla.

**Greg Smith** was the subject of an extensive article in a recent issue of the Salem Evening News by virtue of his selection by the Peabody, Mass., Jaycees as recipient of their "Man of the Year" award. Greg's selection for this honor was largely based on the outstanding job he has done as president of the board of trustees of the J. B. Thomas Hospital. Under his stewardship the hospital received its accreditation, a progressive patient care program was installed and the physical plant and staff relations improved. . . . **Max Wheildon** recently co-authored and delivered a paper entitled "Novel Physical Properties of Materials Made by Hot Pressing" at a meeting of the Refractory Composites Working Group in Los Angeles. . . . By the time these notes appear the end of the 1966 Alumni Fund Year will be imminent, but there will still be time to send your contribution in if you have not already done so. Contributions made this year will be credited to our 40-year class gift. A number of our classmates have been devoting substantial amounts of their time to the Fund as regional chairman, namely, **Wally McDowell** in Binghamton; **Warren Martell** in Long Beach, Calif.; **Bill Perret** in Albuquerque; **Ted Riehl** in Akron; **Ralph Scott** in Lakewood, Ohio; and **Haskell Small** in Washington, D.C. . . . I am sorry to have to report the death of two more of our classmates, **Horace (Joe) Preble** and **Robert (Doc) Crosswell**. I recently received a note from Joe's daughter Carolyn telling me that her father had passed away on February 23. As many of you know, after graduating from M.I.T. Joe went with Congoleum Naim with whom he worked for some 26 years. In 1956 he became consultant to Hendrick Manufacturing Company of Carbondale, Pa., and then moved to Mannington Mills, Inc. At the time of his death he was Mannington's manufacturing vice-president. His memberships included ASTM, TAPPI, ACS, National Council of Industrial Management Clubs and West Hudson Manufacturers Club. Joe retained an active interest in M.I.T. throughout his career and attended reunions regularly, bringing Fannie with him upon occasion. In addition to Fannie and Carolyn he is survived by his older daughter Patricia and five grandchildren. . . . The news of Doc Crosswell's death in Augusta, Maine, on March 3 of a cerebral hemorrhage was transmitted by his son. According to a 1961 report that I received from Doc, he was an engineer with the State Highway Commission in Augusta. He had two sons and two daughters. . . . Changes of address: **Warren Martell**, 101 Glendora Ave., Long Beach, Calif.; **Robert Nelson**, 431 Myrtle St., Glendale, Calif.; **Ernest Reisner**, 3430 Pickett Rd., Fairfax, Va.; **Jack Bloom**, Bonita Springs, Fla.; **David Stanley**, 1500 Chicago Ave., Evanston, Ill.—**Gordon K. Lister**, Secretary, 530 Fifth Avenue, New York 36, N.Y.



All signs point to our 35th Reunion as being the best ever. Those of you who attended the 30th will remember what an ideal spot the Wianno Club is for a reunion and the wonderful time everyone had there. The opportunity to get together with your classmates is something you don't want to miss. Registration and reception at the Wianno Club, Wianno, Cape Cod, starts about 4:00 o'clock on Friday, June 10, and dinner will be served until 8:30 p.m. Saturday, June 11, will be a day for relaxation in the company of our classmates and friends, with luncheon at the Club. Cocktail time starts at 6:00 o'clock, followed by the class banquet. Talks by **Gordon Brown** and **Harold Edgerton** on the changing environment at Tech and stroboscopic lighting and underwater photography will be followed by dancing, movies or slides for those who are interested. The traditional shore dinner will be served Sunday, after which the group will adjourn to Cambridge. The Alumni Day Committee at school has arranged for the showing of Jacques Costeau's "World without Sun" Sunday evening, and the Alumni Day Program starts on Monday following. Dormitory reservations may be arranged for you and your family during the Alumni Day program.

You will be interested to know that one of our classmates, **Emile Grenier**, was one of the men who saw the UFO in Ann Arbor a few months ago. He is sure the thing is real and I'm sure he'll be glad to tell you more about it at the Reunion. . . . **Joe P. McBrien** is county administrator of Contra Costa County, Calif., according to a most interesting 1965 Annual Report Contra Costa County California received recently. . . . A thoughtful note from Warren Henderson (Secretary Class of 1933) reads as follows, "While on a winter cruise to South America, the Rio Carnival Cruise, Mrs. Henderson and I had the pleasure of meeting a '31 man, **Louis S. Morse, Jr.**, of Bloomfield Hills, Mich., Mr. Morse sat next to Mrs. Henderson at the Captain's small dinner for 12 people at his table." . . . A recent publicity release tells of **Francis R. O'Leary's** appointment as European Vice-president, International Group, of Koehring Company. Previously Frank has been executive vice-president of Curtiss-Wright, a group vice-president for Fairbanks Morse, a general manager of one of General Aniline and Film Corporation's divisions, and a vice-president of Emhart Manufacturing Co. . . . Addresses received since the last Class Notes are **Walter C. Bodycomb, Jr.**, Route 6, Hagerstown, Md. 21740; **Smedley D. Butler, Jr.**, 161 So. Devon Ave., Devon, Pa. 19333; **Harland A. Danforth, Jr.**, 2621 La Honda Ave., El Cerrito, Calif., 94530; **Col. Irving W. Finberg**, 17 Lawncridge Ave., Albany, N.Y. 12208; **Emmanuel J. Fournier** 2225 Henri Bourassa Blvd., Quebec 3, Canada; **Theodore C. Morrill**, 213 Old Lancaster Rd., Sudbury, Mass. 01776; **Arthur C. Rubey Jr.**, P.O. Box 40004, Houston, Texas 77040; **Joseph B. Shea**, 1347B Pompton Ave., Cedar Grove, N.J., 07009;

**Fred Stanley** (my thesis partner), Rt. 1, Box 1908A, Port Orange, Fla. 32019; **Norman C. Thomas**, 9807 River Road, Newport News, Va. 23601; and **Charley Wood**, Primrose Trail, Mt. Kemble Lake, Morristown, N.J. 07960. See you at the Reunion!—**Edwin S. Worden**, Secretary 35 Minute Man Hill, Westport, Conn; **Gordon Speedie**, Assistant Secretary, 90 Falmouth Rd., Arlington, Mass. 02174

Today, March 25 we prepare for the June issue of the one and only Review. Leona and I have just returned from a 32-day trip to South America via Moore-McCormack, on what is called the Rio Carnival Cruise. When a trip such as that one approaches only the 75% rating, to me it becomes ill advised, though this is surely not the place to discuss that. I am, however, making up a two-three page commentary for the use of my travel agent, and will run off enough copies of the story to satisfy any unforeseen demand, such as from classmates who express interest via the mails. Those of you who have crossed the Equator and have lived or stayed in the southern half of the world, can appreciate folks finding the seasons just backward from our own. Inasmuch as about 75% of the time away was spent between the Tropics of Cancer and Capricorn, in February and March, we had little need for a top coat, to understate. It was more like, shall we say, a short preview of the hereafter, for those who rate the heat, and whose religious beliefs allow such ruminations. Rio is a most remarkable city in so many ways as to defy anyone's attempt to describe it in such a short tome as this one has to be. Literature is available, but just try to picture say Yucatan around August 15th, or even Vera Cruz, and it gives one an idea of the climate and temperatures available in February and March. To conclude, our last stop was at San Juan, and our visit, mentioned before, with **Bills Pleasants** and **Reed** was a highlight of the whole trip. The fellows arranged a very delightful evening for us, and we sure did the job up brown. Bill Reed and his charming wife made the party four, but Mrs. Pleasants, the lovely Anna Louise was in Atlanta, so Bill P had to come alone this time. We had dinner at the "Top of the First," which means the penthouse floor of the First Savings and Loan Building. A more lovely view of a great city is hard to imagine. Not as high, maybe, as the "Top of the Mark," but a sight less foggy in darkness; truly a lovely spot for dining. After dinner, we had to rush a bit to make the Xavier Cugat Show at the Americana. Just for the record, that show is still the Xavier Cugat Show. He runs it and is number one man, and he is still the same Cugat. I remember digging up a king's ransom for four cover charges, when this fellow was at Ciro's, on the strip, 18-20 years ago. So, folks, the fine dinner, the best show I have seen in years, plus the visiting with these two Bills and one wife, made a truly unforgettable evening. It is

always a pleasure for me to meet an Architect (1933 especially), as we saw little of those fellows while at the Institute. They lived way over there. The IV-A fellows we saw occasionally, but seldom many straight IVs. To conclude, it was a privilege to visit with two congenial classmates, both great company, and a real credit to their respective professions. Jim Turner, did you pick your roommate, or did he do the picking? I'd like to think that you were the smart one, but I fear that it was a toss up.

Now that we are back home we may start to write Class Notes, as per agreement. I have a bleat from Dr. **William Harper**, of Galveston and environs, saying that he had nothing to write about as he had not received his Reviews for almost a year. Bill, I do not write these notes to give you characters something to reply to; you are supposed to write me, so that I can have something to write about. I gave Bill quite a lot of space just lately, but I must add that "Texas Chiropractic College" is installed in new facilities at Pasadena, Texas (see Atlas). Bill is the administrative head. Bill's book, *Anything Can Cause Anything*, is in its second successful year. I never got my copy, even after that plug I gave the guy a year ago. Anyway, Bill has a copy for each and all of you; just send in your check for mailing and handling costs, and the book is free to all classmates. Make the mailing check \$4.99. Bill does not promise to autograph, however, **Bobbie** is practicing in Seabrook, Texas, (home to William and Bobbie), next to the Astronaut Space Center or whatever it is. No more publicity for you, William, until you send in more material, about other classmates.

I had a short letter from **Westy Westaway** a short time ago, which, in truth, was in reply to one of mine. Please have it understood that anything from Westy is more than welcome, though possibly not too long and windy. He is well, and spending more time in Hartford, Conn., than formerly (Ingersoll-Rand), and more than he likes to spend there. Strangely, there are folks who prefer to be in the Back Bay. Anyhow, always nice to hear from Westy. . . . Another and unexpected note; this time from **Prentiss Lobdell**, who, if my memory serves even at 50%, was at one time very handsome and curly headed. Loby is one of the few who have written me to say that they are readers of the Review, but whose names appear on the list of those who do not read the paper. We were not too careful with that list, and have hoped that anyone who received my November letter, and complimentary copy of the Review, but who does get the Review regularly, would let me know. So, Loby now tells me that he has always had the Review, because, he is a life member of the Alumni Association, as am I, myself, and as are many others. We got a bargain way back about the time we got out, and again memory runs interference, and was it \$60.00? Loby wrote from the Teheran Hilton, where he found a minute to drop a line, while on a Standard Oil (New Jersey) business trip. Loby has been with Standard since he took his Masters (Course XV) in 1934, and at present is one of a small group of the company's

"Eyes and Ears in the Middle East," whatever that is. That gets him a trip of about a month to the Mid East every two-three years, and, most important, in the winter, as this is the best time to visit that part of the world. Loby likes Westport because of a fine yacht basin and clean beach. Is it not quite a bit to the inland for a beach? Loby has two children, both in Junior High. With a large and growing Grandfathers Club, this character has children in Junior High. Well, well; it appears that this fellow was a little hard to get. Well, Loby, these youngsters have a way of growing up awfully fast, so you will be joining the Club sooner than you presently expect. Thanks a million, fellow member (Life). Try this again once a year or oftener, no?

Recently, Beau Whitton, my mid south correspondent, wrote concerning **George Wrigley, Jr.**, '33, of Greenville S.C. It appears that Beau told a story about George that George wishes to revise, and does, over his own signature. He is president of J. E. Sirrine Company of Greenville, Engineers and Architects, who specialize in the paper and pulp, and the textile industries. It seems that business affairs are demanding and getting too much of his time; as a result, his golf game is suffering. George has a married daughter and through her, two grandchildren, which gets him into the Club pronto. Since his son-in-law is in Vietnam, the whole family now lives with George. George Wrigley III is a student at Wofford College, and his younger daughter, 15, is in high school. I hope it is a big home with lots and lots of help, George, and thanks for the personal press issue. . . . Now, to all readers, in general, the way to get your name into the column, is 1) have Beau write in for you, and then, to get in again, 2) write in making corrections on Beau's stuff, and there will be some, of course. Have I not told you that I do not guarantee accuracy, if some alterations make a better story. It is only natural that I might well take more liberties with accuracy when an old Course II fellow is involved than I would were it a Course IV. So, Beau, you turn it in; if it sells papers, I will quote direct. If not, I will quote so that it will. How's that?

Now, comes **Cal Mohr**, my good and faithful servant. Cal, I have done little to urge anyone to contribute to the Alumni Fund, as I wish to be the one place where the boys (and girls) will always be welcome without buying their way in. However, I yell like blazes about the small readership list, and will add that a contribution to the Fund gets one on the regular mailing list for all Reviews. Please let me add that one must keep it up. 15 bucks won't buy my stuff for the rest of your life, fellows. **Lou Flanders** says that over half the class contributed this last year, and, so far as I know, this is the very first time that we passed the 50% figure. It is far better that 500 men each make a certain contribution, than to have half that number contribute the same total amount. Why? Write me for the story. . . . **Dick Smith**, (**Richard B**), Rock Island RR, and maybe another one too, if the merger goes through: Dick called Cal about the big Chicago Regional Conference. . . .

**Chuck Thumm** was in Chicago, at the Travel Show, and Cal went into town and had lunch with him. Chuck was promoting the Cochise Lodge, his own, in Elfrida, Ariz. This Lodge has had previous mention. Cal says that Chuck looks exceptionally well, and the Lodge is also doing well, under Chuck's excellent management. . . . **Dr. V. L. (Larry) Parsagian**, Head of the Department, at Rensselaer, has just come out with a new book, "Industrial Management in the Atomic Age." The good Doctor got his write up a little earlier, but we just have to plug the book, as that is income. . . . Cal mentions that he hears of the passing of **Vic Jaffe**, who tired of the Course XV type of engineering, and then went to Dental School. We wrote up Vic's passing a couple of months ago. Once more, may I call to your attention, the delay which is inevitable, in getting news published in the Review. I received notice of Vic's passing before Christmas but all we get at first is a form, filled in by a girl in the Alumni Office, with bare details only. I did finally get the story ready to write and mail with the May issue, mailed right before we took off for Rio, February 11. I had already mailed the April notes. For any issue, I mail generally around the 5th of each month. You read it seven to eight weeks later.

Now for the press, as time will allow. Not news, but still eligible for the Notes is the election of our own **Dayton Clewell**, as a five year member of the Institute Corporation. Perhaps you folks will remember voting on Dayt's name sometime in the immediate past. Now, my contribution; this is the type of man I like for that particular job, and there is not much question that the Institute is the fortunate party, this time. It sort of makes us feel that the affairs of the old School are in excellent hands. Any man that can cook beef stew in the middle of a dormitory and is naive enough to think no one knew about it will go far, and, believe me, he has. The whole class, Dayt, joins me, in offering our very best wishes, and congratulations on this singular honor. . . . The class of 1933 is again proud to have mentioned that our distinguished classmate, **Morris Cohen**, has been honored by the University of Virginia, by being asked to serve on their Scientific Advisory Board, established in connection with their new Center for Advanced Studies in the Sciences, in Washington, D.C. Just in case some of you folks do not appreciate the kind of man we have in Morris, there appears to be no question whatever, that he must be considered one of our most distinguished graduates, living or otherwise. Morris is Ford Professor of Materials Science and Engineering at his own School, M.I.T. Morris has been honored so many times as to make any further effort to recall his honors just a bit futile. Morris, we are proud of you, and we want you to know it. . . . Westy Westaway has run into **Dick Morse**, and **Fred Murphy**, the latter in Attleboro. Westy says that Fred is a ski enthusiast; may we have a few particulars, Fred? It must have something to do with the Murphy family, as old fellows like Fred stay young, or close to it, by playing with the kids, or at

least I did for a while (until they got me down for good) almost. Westy says that Fred gets all the breaks as he has no paper work to do like Westy has. It appears that Westy is also a ski enthusiast.

After a little persuasion, I get a rather nice, both sides 8½ x 11 from **Ed Goodridge** (in reply to a threat of mine, of course). I did mention, before and recently, that Ed has gotten embroiled in two other business enterprises. Ed's letter does not add much to what we had before, except that he has had his first press release on his new process of Electrostatic coating with dry powder rather than with paint. He avers he got a fair amount of response and there are still some problems. . . . **Mal Fleming** has a new and added business; East Coast Distributor of Winn's Speciality Products; sold through gas stations. These products are gas and oil additives, cleaners, and polishes. Mal's other business is the importation, treatment, and sale, of exotic leathers, whatever those are! Explain, Mal? I will give you a short plug for a short letter, and so on, proportionately. Mal has a "new" house on Long Island. The address file has Mal firmly established in Rockville Center, N.Y. I need help, Mal. Is it a new house? It appears that Dayt Clewell recently had dinner with Larry and, I must quote, as this is not too clear to me; ". . . had dinner with him (Larry) recently, and he seems to be responsible for a multi-million dollar building program." . . . **Werner Bachli** is now insulation manager for International G. E. . . . **George Ropes**, who lives in Scarsdale, is still busily engaged in his new love, teaching science at White Plains High School. He is still consultant for Acme Fast Freight, Inc. This new profession of George's is intriguing, and in my book, a very commendable, admirable and unselfish thing to do. I think I like this guy George real well. . . . I wrote Ed asking what the details are about **John Wiley**, as my press blurb is too brief. Ed is looking into it so I will have to quote the press verbatim, to get any sense into it. "John Wiley and his good wife returned, recently to Asuncion, Paraguay, February 10 to be exact, to begin John's Second Tour of two Years as Director of Aid in that country." That's it. The first Tour got no mention anywhere, at least nothing came to my attention. The last I had was John's moving into New York City from the country, ostensibly to be nearer the Office. That would have been about two years ago, so John was holding back on that one. These fellows do not seem to object to our kind of publicity, just so long as someone else writes in about it, making the publicity appear on the books at no cost either of money or time, to them. . . . Now, just a word on our hard working, and poorest handwriting President that we have. I sure love anyone that sends me anything whatever, legible or not. Anyone who has seen my typing can appreciate my reasons for using the machine. It can't spell half as well as I can, but one gets the idea from the typing, bad as it is.

Follow up brings to my attention a letter (circular, perhaps) that I sent to six of our more prominent officers, on December 30. Quickly, this was a request to



these six asking each to send in nominations of as many names as possible, of men in various parts of the country who "get around, to meetings of all sorts, and who are in a position to meet classmates, and pick up gossip for the 'Notes' mill." Enough time has passed to allow for about everything, and two of the six made a reply, almost at once: Ed Goodridge and Cal Mohr. I did expect another (a third) out of six, with little hope that I might hear from the other three. However, the letters were carbons, for saving time, and the 18¢ won't break me, this time. I mention this incident only to make a point; what our Spanish friends call "Apatíe", a disease common to about 97% of the 1933 boys, and girls. The names of these four "busy" fellows will not be used here, for obvious reasons. Belatedly, I offer my sincere thanks to Ed and Cal, and I can assure them that the names sent in are excellent choices, or will be until I write to them for help. Gosh, I sure would love it were I to hear from each and all, telling where I can go. It is not flattering to me to write a man and have him ignore the letter.

I note with interest that several, maybe more, class Secretaries are filling up the column by having changes of address printed in the notes. I will not go quite this far, because, of the 10 changes of address, 10 have never written to the Secretary, so they get a mention, thus: We have address changes from **Frank Bleil**, Course VI; **Doctor Katherine W. Carman**, XII; **Sam Cauman**, IV; **George Cory**, IV; **Jim Loughman**, II, (my course); **Court Marshall**, X; **Bob Ripin**, IXB; **Bob Trimble**, VI; **Elmer Waterman**, I; **LeBurton Webster**, XV. Classmates may have any of these changes by writing me, or the Alumni Office; to me, if the note has other information for the notes, and the Alumni Office otherwise.

We are again saddened to hear of the passing of **Ted Neubauer**, Michigan 1931, and M.I.T. 1933, Course II, in Refrigeration, and Ted just about hit the top in his own line by being elected to "Fellow" in the A. S. M. E.; an honor with which the Society recognizes excellence of performance in the various phases of Mechanical Engineering. Ted not only was tops in his profession, but seemed to lead a well rounded life otherwise, being prominent in civic affairs both in LaCrosse, Wis., and in Sidney, Ohio. Ted was with York until 1943; the Manhattan Project until 1948; with the Trane Company until 1958, at LaCrosse, and with Copeland, Sidney. All engineers know these connections. Ted was also prominent in Rotary Club work, as well as Chamber of Commerce. There is much more to Ted's highly successful story, far too much for this column. He was a devoted churchman, Lutheran, and was quite active in the A. S. M. E. He is survived by his wife, Dorothy, a son, Theodore E., a sister, and two brothers. We all join in offering Mrs. Neubauer and Ted's family our sympathy. This man will be missed. . . . That wraps up this particular column; there is one more, July, and this semester is all over for the Secretary. Our summer vacation starts the first week in May, and runs for three months. Don't forget that we are at the farm, ad-

dress below, all summer, so those fellows passing thru or near, have only to phone us from the Turnpike, 772-2333, around 3 to 4 p.m., so as to arrive at the very best hour. Among "those," please find **Red Williams** and **Mal Mayer**. That's it.—**Warren Henderson**, Secretary, Fort Rock Farm, P.O. Box 14, Exeter, N.H. 03833

## '34

**Carl Wilson** leaves on May 9 for a four week business trip to France and Italy—his fourth in recent years—he plans to be back for Alumni Day, Monday, June 13 and hopes to see a good turnout of '34 on that day. . . . Had a note from **Hank Backenstoss** in connection with a major business problem a client of mine has in Lebanon/Saudi Arabia; Hank offered to help and gave me his latest home address as 107, Rue Boustani, I mm. Dr. George Khayat, Ras Beirut, Beirut, Lebanon. I understand Hank is extremely busy as vice-president, Middle East Operations, Jackson and Moreland International Inc.; he wrote on 2/28/66, "There won't be time for any class notes from me today but I have had a guilty conscience about this for longer than I like to recall—." . . . Ran into **Bernard Gilbert**, Course VI, at Computer Show; he is heavily involved in use of electronic data processing at Naval Ordnance Laboratory, White Oak, Md.

Heard from **Ted Rimbach**. "From the Rimbach Annual Review: Ted and Sylvia celebrated this fall by taking the first long vacation alone together in 27-1/2 years, traveling by car to New England, visiting for a week with Mother Rimbach, Ted's sister Barb (where we lived in style at 49 Beacon Street) and Sylvia's sister Lucile. It was such a joy to be able to visit friends and relatives together. Upon leaving Boston we drove to Atlantic City, N.J., to attend the Water Pollution Control Federation Convention. The moon was full, the surf lovely to watch and hear, the weather balmy and reunion with many friends and making new ones made that part of the trip another particularly memorable occasion. We completed our trip by trekking across country to Mt. Vernon, Iowa, to Jean's college Parents' Day on October 16. Upon arrival home after the 2-1/2 week trip we agreed that the second honeymoon was worth waiting for! Ted manages to get in some volleyball, comes home for lunch when in town, keeps the 'estate' in good shape, is still on Webster Groves Board of Health and on the Worship Committee at Emmanuel Episcopal Church." I received a short note just before going to press. "Dear Norm: After reading March notes perhaps some of the doings of the Rimbach clan will be of help in material. Our daughter Jean is now in France with the Experiment in International Living. She is living with a French family in Dijon, but since she has been there less than two weeks, the news is scanty so far. Our Rimbach and Associates Company, is well in the black so it will be our pleasure to use some of our 'Tax Credits' come April 15. Here in St.

Louis, **Harold Thayer** has earned a new title for he is now chairman of the board and president of Mallinckrodt Chemical Company. Our local Board of Health Commissioner has done some interesting and effective work (including some pioneering in local meat, frozen food and poultry ordinances plus the more routine matters of health. Both our arch and the new ballpark are approaching completion so you should come visit us. Regards, Ted Rimbach."

**Charley** and **Eleanor Stewart**, Zanesville, Ohio, visited M.I.T. during the weekend of February 11 to see their son Bill initiated into Beta Theta Pi. Bill is playing on Freshman basketball team so Stewarts doubled the regular M.I.T. fan club at a Saturday game. This news item came in through my wife Bea who was also at the game that morning; my youngest son Bob managed the championship Browne and Nichols team which Tech played that morning. Bob incidentally has shown the immaturity of his years by accepting a Freshman berth at Harvard next Fall.—**Norman B. Krim**, Secretary, 15 Fox Lane, Newton Center, Mass. 02159. Co-secretaries: **Kendrick H. Lippitt**, 3782 Putter Drive, Chula Vista, Calif.; **Charles M. Parker**, 3 William Street, Norwalk, Conn.; **W. Olmstead Wright**, 1003 Howard Street, Wheaton, Ill.

## '35

Distant places have such compelling fascination for me that as soon as I received **Lou Pflanz's** long letter from Turkey, which appeared in the March class notes, I could hardly keep from announcing him the winner of the prize which I had offered. Now that enough time has passed, so that I could judge all entries more objectively, I do announce that Lou is the winner—of a gift certificate from the Technology Store. Congratulations!!! . . . **Gerry Rich** still lives in Santa Cruz, adjacent to the 13th fairway of the PasaTiempo Golf Club, and commutes weekly to his plant which is in Los Angeles. . . . **Frank Wilkins** is with RCA in Burlington, Mass. . . . **Wes Loomis** has been named a director of the Foundation for Human Ecology, Park Ridge, Ill. The foundation is the fund raising and development arm for the Lutheran Institute of Human Ecology which operates Lutheran General Hospital, Park Ridge, and Lutheran Deaconess Hospital, Chicago. . . . **Frank Walters**, who is manager for rates and economic research at Potomac Electric Power Company, has been elected a director of Home Federal Savings and Loan Association, Washington, D.C. Frank has been with Potomac Electric Power Company since graduation. . . . **Forrest Goldsmith** is chief engineer in charge of research and development at BTU Engineering Company, Waltham, Mass.

By the time these notes will have appeared in the June issue, invitations to enter our class's Sixth Annual Golf Tournament will have been received by all prospective participants. Those who wish



to enter should return their entry cards as soon as possible to either **Art Marquardt** or **Allan Mowatt**.—**Irving S. Banquer**, Co-secretary, 20 Gordon Road, Waban, Mass. 02168; Regional Secretaries: **Arthur C. Marquardt, Jr.**, 178 Mt. Vernon St., Dedham, Mass. 02026; **John H. Colby**, Rt. #1 Box 91A, Islamorada, Fla. 33036; **Edward Loewenstein**, 444 Cornwallis Drive, Greensboro, N.C. 27408

## '36

Reunion time at the Curtis Hotel in Lenox is fast approaching. Chairman **Frank Berman** reports a most encouraging response and is planning the program in line with suggestions included in the questionnaires returned. **Bob Wead** is working with Frank, and your Secretary will be on hand to greet you. It isn't too late to decide to attend. Do try to make it. When? Friday through Monday, June 10 through 13. Where? The Curtis Hotel in Lenox and at M.I.T. for Alumni Day. . . . I regret to report the death on March 17 in Charlottesville, Va., of **Dr. William Parker Anslow**, professor of physiology at the University of Virginia and former chairman of the physiology department. Parker was a native of Medford, Mass. He received his Ph.D. from Cornell Medical College and worked as a biochemist at New York University from 1944 to 1952, when he joined the Virginia faculty. His specialty was the function of the kidneys and he was the author of many research papers on this subject. . . . **Gordon Thomas** reports on his change of address noted last month that it is only nominal. He writes: "As staff executive engineer for Lummus, I float between offices performing various consulting services for Lummus' divisions and/or clients. Present concerns are a refinery on the Spanish Riviera, a paper mill in Northeast Canada, and a highly automated Aircraft Fueling System for New York's Kennedy Airport. Although the present address is Newark, Montreal is my operating base up north, and Madrid while in Spain. I'm quite at home in all three places. The family summers and participates in winter sports in the Laurentians with pleasure." . . . **George Parkhurst** writes that his move was hardly newsworthy and continues, "We did build a new 'Colonial Saltbox' house—11 rooms . . . My life, although occupied about 25 hours per day, consists of the usual business activities (International Equipment Company) and travels plus church and community theater meetings several nights a week. I'll let you know if I do anything startling." . . . Changes of address include **Douglass Hawks, Jr.** from San Diego to Apt. 14, 11735 Culver Boulevard, Los Angeles 90066; **David Weiss** to 48 Colony Acres Road, Longmeadow, Mass. 01106; **Norman K. White** to Chestnut Hill, Mass. from West Roxbury (165 Hackensack Road 02167); and Brigadier General **Robert C. Tripp** to 245 Estates Drive, Piedmont, Calif. 94611.—**Alice H. Kimball**, Secretary, 20 Everett Avenue, Winchester, Mass. 01890

## '37

**Jim Newman** has recently been named Executive Vice-president of Booz, Allen and Hamilton. Jim, formerly a vice-president, was named head of the company's eastern region. This includes direction of the company's Washington, D.C., office's management-consulting service for the federal government. He also was named President of Booz, Allen, & Hamilton, International N. V., a subsidiary, and as head of all European activities. . . . **Bert Bennison** has been named head of the department of biological sciences at Drexel Institute of Technology. Bert spent 11 years with the U.S. Public Health Service and an equal period in industry.

**Herb F. Goodwin**, who is a professor at the Institute, recently conducted the programs for the New England Shoe and Leather Association all-new management development seminars for shoe factory executives.

**Dix Becker** has been appointed Vice-president of Anchor Fasteners, division of Buell Industries, Waterbury, Conn. He has been with Anchor for the past eight years as chief engineer and will continue to hold this position, as well as that of vice-president. Dix holds over 30 patents in the industrial fastener field. . . . **Sidney Sussman** has been elected an officer of Water Service Laboratories, New York, N.Y. He has been technical director of the firm since 1961, and has been elected vice-president. He joined WSL in 1949 as chief chemist and is a fellow of the American Institute of Chemists, and was among the first group of specialists to be certified Qualified in Corrosion Control by the National Association of Corrosion Engineers. . . . **Hjalmar Bruhn** was among the recipients of the Silver Award from the American Society of Agricultural Engineers at their recent meeting in Madison, Wis. This award is presented to agricultural engineers who have devoted 25 or more years to their professional society. Hjalmar is professor of Agricultural Engineering at the University of Wisconsin and has been there 33 years. . . . **Bob Ferguson Jr.**, **Rutherford Harris**, **Jerry Salny** and **Al Shulman** are currently serving as regional chairmen for the Alumni Fund this year. Bob is in charge of the Sewickley, Pa. region; Rutherford at Shaker Heights, Ohio; Jerry of Morristown, N.J. and Al of Hartford, Conn. **Dave Fulton**, **E. T. Herbig, Jr.**, **John Nugent** and **Les Klashman** have added their names to the list of our class who are planning to attend our 30th reunion.—**Robert H. Thorson**, Secretary, 506 Riverside Ave., Medford, Mass. 02155; Professor **Curtiss Powell**, Assistant Secretary, Rm. 5-325, M.I.T. Cambridge, Mass. 02142; **Jerome Salny**, Assistant Secretary, Egbert Hill, Morristown, N.J.

## '39

Our class appreciation is extended to **Manning C. Morrill**, X, for having accepted the appointment by the M.I.T.

Alumni Fund as "Class Estate Secretary," a new position created recently for those classes beyond their 25th reunions. Manning's function will be to promote deferred gifts, primarily bequests, for the Institute, and '39ers will be hearing from him in that connection. As you know, (Class Notes, January, '65) Manning is president of the Cryovac Division of W. R. Grace Company, with his plant and office headquarters in Spartanburg, S.C. . . . As another Alumni Fund note, four more '39ers are serving the Institute as regional chairmen for regional solicitations. These are **Charles S. Parker**, XV, of Longmeadow, Mass.; **Earl N. Reynolds**, X, of Cincinnati, Ohio; **Albert C. Rugo**, I, of Milton, Mass.; and **Theodore A. Welton**, VIII, of Knoxville, Tenn. And **Robert L. Frank**, VI-Grad, is also a regional chairman, in Great Neck, N.Y. All five of these men have given substantially of their time and effort, so important to the success and continuing growth of the Alumni Fund.

**George A. Moore**, IV-A, President of his own firm, George A. Moore and Associates, General Contractors, of Portland, Ore., has been recently elected as president of the Oregon Chapter of the Associated General Contractors of America, Inc. To quote from the Daily Journal of Commerce, Portland, "Of all the presidents the . . . chapter has had, we think . . . George Moore will rank toward the top of the ladder in furthering the objectives of the group. He possesses the personality, the aggressiveness, is a good public speaker, a graduate architect from M.I.T. has had years of experience in general construction, and last but not least, possesses a good sense of humor, so important today in dealing with any top brass allied with construction." . . . **Arnold Goldberg**, II, has joined the Elgin Manufacturing Division of Doughboy Industries, Inc., as design engineer. Elgin is engaged in design, development, and manufacturing of filling, capping, and wrapping machines used throughout the country. Arnold's career shows that he has adhered closely to his mechanical engineering training, for he has worked with Army Ordnance on ammunition feeding devices for aircraft cannon, with G.E. on mechanical design of radar, with Bell and Howell on optical test equipment and with Republic Flow Meters on pneumatic and hydraulic industrial instruments and regulators. Prior to joining Doughboy, he was chief engineer for C. Doering & Son, manufacturers of butter packaging machinery, and before that he owned the Goldberg Engineering and Machine Company in Chicago.—**Oswald Stewart**, Secretary, 3395 Green Meadow Circle, Bethlehem, Pa. 18017

## '40

Tech has established the office of Institute Estate Secretary to promote deferred gifts to the Institute. **Tom Creamer** has been selected as our Class Estate Secretary. No doubt you will have heard from Tom by the time you read these notes. . . . **David Brown** is now chairman of the board of Scientific Design Company, Inc. Previously, he had been vice-president for

Research and Development and was the Acting Chief Executive Officer prior to his present advancement. . . . **Bill Lamb** has been elected Vice-president of business development for new areas of the Parsons-Jurden Corporation, one of the largest engineering-construction firms in the United States. Bill and his wife, Patricia, and five youngsters live in Hillsdale, N.J. . . . **Dan Puffer** has recently joined the General Electric Quarter Century Club following 25 years of service with the company. At present, he is manager of Advance Quality Control Engineering with the Small Aircraft Engine Department in Lynn, Mass. Dan, during the course of his employment, has been the inventor of three patents and in his spare time works at photography and furniture making.

**Charles DeMaily** has been elected Executive Vice-president of the Emhart Corporation. Formerly, he was president and a director of the Plymouth Cordage Company, which was recently merged with Emhart. . . . **Sam Goldblith** continues his work on the irradiation of foods. In the February, 1966, Food Technology there is an article by Sam on "The Wholesomeness of Irradiated Foods: Past History, Present Status, International Aspects, and Future Outlook." He also has an article in Science Journal for January, 1966, on "Radiation Preservation of Food." . . . The final note is that **Claude Shannon**, who is the Donner Professor of Science at Tech has been awarded the Medal of Honor of the Institute of Electrical and Electronics Engineers. This award, which is only given on infrequent occasions, was won by Claude's development of a mathematical theory of communications which unified and significantly advanced the state of the art. Much of Claude's work has been in the field of wire and radio communications and computers. . . . Comments from the readers, if any, of this column would be appreciated. Since the Reunion in June, there have been only two letters from classmates to supplement the clippings supplied by the Technology Review Office. I believe the column is more interesting when it contains first-hand letters.—**Alvin Gutttag**, Secretary, Cushman, Darby & Cushman, American Security Building, Washington, D.C. 20005

# '41

To those of you who have been fearful of being displaced by computers, Dr. **Robert M. Fano** has co-authored some good news in an article appearing in Business Automation recently. The article reads: "There is nothing we can see inherent in the use of computers that will impersonalize, institutionalize, or automate our behavior. The danger lies in ourselves. Computers will not take into account any premise, any limitation, or any fact that has not been made available to them. We never delegate to them either the formulation of our problems, or decisions as to the adequacy of the solutions they produce. Exploitation of computers for the

benefit of society hinges upon two pivots: education, and responsible, considered action by members of the technical community." With regard to use of computers in the household, another of his co-authored articles in Data Processing Magazine states: "The average man and wife will use a computer as casually as the automatic washer-dryer and power tools in their basement. Unless they do so, we may not survive the increasing complexity of our society."

Addresses of the following classmates are unknown. David Jacobson, Jr.; Harold C. Banks; Stephen A. Birch; Jose A. Andino; William S. Warner, Jr.; Alfredo Blanco Rosell; Richard Arnold, Jr.; Irving Berman; Cranmore W. Cline; Clarence C. Davis; Walter B. Davis; Winifred L. Erskine; Albert A. Frink; Alphonse P. Gauvreau; Edward L. Hurst; John D. Knox; Raymond B. Drieger, Jr.; Kermit Latin; Walter H. Lob; Rollins H. Mayer; William F. Osborn, Jr.; David H. Pepper; James K. Pickard; Harry J. Singer; John S. Stamm; Milton R. McGuire. Please forward any information you may have concerning their addresses so that we may contact them for the Reunion. Better still, you make the contact.

Classmates who are giving substantially of their time as regional chairman for the regional spring period solicitation for the Alumni Fund are as follows: **Michael Driscoll**, Brookline, Mass.; **Sterling H. Ivison, Jr.**, Bethesda, Md.; **Joseph H. Myers**, New Britain, Conn.; **Benjamin C. Scott, Jr.**, Dallas, Texas; **Robert D. Taylor**, Acton, Mass.

## 25th Reunion

**Michael Driscoll** has been appointed town engineer of Nantucket, Mass., a newly created post voted into being at the last town meeting as a consolidation measure of several town departments under a single department of public works. The departments include the Sewer Commission, Park and Recreation Commission, Tree Commission and the Highway and Cemetery Departments. After graduating from M.I.T. in 1941, Mike worked on engineering projects in Central America and Nicaragua until 1945 when he entered military service as a lieutenant in the Aviation Engineers, serving two years in Germany and France during reconstruction work. Following his military service he has for 16 years been assistant manager and engineer at the Holyhood Cemetery, Brookline, one of the largest Catholic burial grounds in the Boston area. During that period he attended Northeastern University Law School night classes and received an LLB degree in 1955. He was admitted to the Mass. Bar in 1956. For the last two years he has been engaged in insurance and law practice. While presently living in Brookline with his wife and six children, he intends to move to the island after the close of public schools in June.—**Walter J. Kreske**, Secretary, 53 State Street, Boston Mass.; **Henry Avery**, Assistant Secretary, 169 Mohawk Drive, Pittsburgh, Pa.; **Everett R. Ackerson**, Assistant Secretary, 16 Vernon Street, South Braintree, Mass.

# '42

Fred Lehman has asked me to give some mention to the members of the class who are giving substantially of their time for the regional solicitation of the Alumni Fund. They are: **Dick Cathcart** for Kalamazoo, Mich.; **Rod Flinchbaugh** for Needham, Mass.; **Adrian Marcuse** for Glen Cove, N.Y.; **Pete Sloss** for Highland Park, Ill.; and **Bill Van Nostrand** for Bronxville, N.Y., **Bob Fabacher**, who was formerly advertising and public relations director of Jax, has recently been appointed marketing director. Bob has been with the company since 1948 and is active in many civic and professional groups. . . . **John Clarke** has been elected Executive Vice-president and Director of the Hartford Life Insurance Company. President of General Reinsurance Life Corporation of New York for the past four years, he began his professional career with Travelers Insurance Companies and, with time out for World War II, served as an executive actuary until 1954. He then joined Pan American Life as vice-president, actuary and controller. In 1956, he became Senior Vice-president of Gulf Life Insurance Company. He joined General Reinsurance as president in 1962. . . . **Al Clear**, about whom I wrote just over a year ago, has been elected Vice-president of the Stanley Works in New Britain, Conn. Al is an alumnus of the Harvard Business School and I saw him from a distance at the recent National Business Conference held by the School in New York, though I was unable to speak to him.

Finally, I am quoting excerpts from a very interesting letter which **Warren Loud** wrote to Professor Magoun, who in turn forwarded it to me. I wish we had more such letters to report in the column. Warren says: ". . . last year we had the big adventure of a year in Europe. The whole family got a great deal out of it, and we are all very much richer. It was our intent to live as much as possible in the language and culture of Germany, and everybody helped us out. The educated people with whom we came into contact knew English mainly the way an educated American knows German: well enough to read easily and in many cases to write well. The prerequisite to a good speaking knowledge for most Germans that we met was a period of time spent in England or America. I have therefore become somewhat sceptical of intensive speaking training in the schools with de-emphasis on grammar. We acquired an everyday speaking vocabulary rather easily, but it was valuable to have a knowledge of the structure of the language and the way ideas are expressed in it. One year is nowhere near long enough to acquire the vocabulary which enables one to participate in complicated philosophical discussions, but we had many opportunities to converse over a wide range of subjects. We put our three children (ages 15, 12, 10) into the local German public school. Let no one tell you that children pick up a language immediately. They told us that it was three or four months before people seemed to be talk-



ing slowly enough to understand, but by the end of the year, the children had much better pronunciation than their parents. They have not suffered on their return to Minneapolis schools, though our older daughter seems to be missing out on some of the activities at school because her program is a little irregular. We did much travelling. Every time the children had a school vacation, we got into our little Opel and took a trip. We must have put 10 to 12 thousand miles on just visiting places in western Europe. We found we could use our French in France, our German in Germany and Austria. Elsewhere we had to rely on English, particularly in Scandinavia. We visited all the major cities in western Europe including Vienna, Zurich, Geneva, Paris, Berlin, Rome, Venice, Florence, Milan, Copenhagen, Stockholm, Oslo, London, Edinburgh among others. I had seen Paris and Vienna before, but the other places were all new and every place was new to the rest of the family. I could go on the way everyone who returns from his first visit to Europe does, but I will say that the most exciting place we visited was Berlin. I think that I would not wish to live in the tense atmosphere of Berlin, but it is very much a symbol of the world in which we live. We drove to Berlin and as foreigners were required to use a particular Autobahn. It was a long tedious process (1-1/2 hours) to get clearance to enter East Germany, then a quick uneventful drive to Berlin, another long delay passing the checkpoint into West Berlin. There we were not allowed to take pictures, but we won't soon forget the elaborate precautions they take to see that East Germans do not 'escape' into West Berlin. Trunks in cars were measured to be sure there was no false back behind which a refugee could hide. West Berlin itself is a most modern city, restored to a very large extent. West Berlin is an island in the middle of East Germany, but many of the scenic parts of the city are in the west zone. East Berlin is not yet anywhere near rebuilt. There are some new buildings, but in general it is a city with shabby buildings and high prices. We spent a few hours in East Berlin, again with much red tape at both crossings of the border. Our return to West Berlin was particularly dramatic. It had been a hot sultry afternoon, and as we were in the railroad station where the checkpoint was, the sky grew ominously dark and there was a thunder storm. The officer who looked at our passports stared very hard at each one of us, to be sure that we were not 'escaping.' Well we have now been back for more than six months, and have taken up our old ways of doing things. Life at the University of Minnesota is always exciting. I still find plenty of work to keep me busy; I have more ideas for research than I can carry out. Along with teaching, advising and research I have some particularly stimulating committee work. I am a member of the all-university Council on Liberal Education, a group charged with developing a program whereby every student at Minnesota, and not just those in the College of Liberal Arts will have serious contact with ideas and methods in a wide variety of subjects. This council was one of the fruitful ideas brought by

the present president of the University of Minnesota."—**John W. Sheetz**, Secretary, Harvard Business School, Boston Mass. 02163

## '43

**Carl O. Carlson** was appointed as regional manager for the western region of the Factory Mutual Engineering Division of Factory Mutual System. This region covers San Francisco, Pasadena and Seattle. Carl has been employed by Factory Mutuals since 1947. . . . **Paul Coulson** was appointed to represent M.I.T. at the inauguration of the new President of Auburn University in May. . . . **Walter A. Netsch** was a lecturer on the topic "New Trends in Architecture" in February as part of the lecture series sponsored by the Homewood-Flossmoor Associates of the Woman's Board of the Art Institute of Chicago. Walter, as many of you know, is a general partner of the firm of Skidmore, Owings and Merrill in Chicago. One of his latest accomplishments is the design of the University of Illinois Chicago Circle Campus and his works include master planning and individual buildings for the U.S. Air Force Academy in Colorado; the master plan of the new lakefront campus and individual buildings at Northwestern University in Evanston, Ill., and the New York Life Insurance Company buildings in Chicago. . . . **Robert K. Dix**, who received his doctor's degree with our class, was elected President of Enjay Chemical Company of New York. . . . **Albert E. Bakker** was chairman of Alumni Fund Regional Solicitation in Buffalo, N.Y. and **Art Vershbow** in Newton Center, Mass. . . . A class dinner was held at the Faculty Club at M.I.T. on April 11, 1966. We were addressed by Bob Simha, Class of '57, Planning Officer at M.I.T., who told us of the tremendous growth taking place at the Institute. Present were Jim Hoey, Kemp Maples, Ray Richards, Art Vershbow, Gene Eisenberg, Bill Voorhis, Ralph Leader, John Reed, Ken Warden, Charlie Coles, George Freedman, Jim McDonough and yours truly. We are planning a cocktail party and buffet for alumni day weekend, this time including the wives.—**Richard M. Feingold**, Secretary, Ritter & Berman, 266 Pearl Street, Hartford, Conn. 06103

## '45

I know that you all join me in wishing the Class of '46 a most successful 20th Reunion at Provincetown later this month. Yours truly together with **Bob Maglathlin** sat with the following '46ers at the March Alumni Council Meeting: Clarence S. Lyon, Ted Heuchling, Bob Spoerl, Ned Tebbetts and Stu Egerly, all of whom asked that I convey their best wishes to you both collectively and individually. . . . **Vince Butler** called from the Coast about three weeks ago to report that he had been promoted to Commander,

USNR. I fear that Vince is the only '45er of V-12 fame to make the grade: if I'm mistaken let me know so that I can make the proper amends. . . . **Nick Mumford** is in town this week attending an AMA Seminar and we hope to break bread before the week is out. . . . The Alumni Fund reports that I failed to mention the following Regional Fund Chairmen: **Dave Cohen**, Roslyn, N.Y.; **Ross Compton**, Hamilton-Middletown, Ohio; **Bill Humphries**, Holliston, Mass.; **Art Lacroix**, Stratford, Conn.; **Bob Maglathlin**, Scituate, Mass.; and **Sig Penner**, Wichita, Kansas.

**Gladys Lyons Mitchener**, formerly of Longwood Towers, Brookline, a city planner for Boston and Cambridge, died in Clifton, N.J., on Friday, February 11, following a long illness. Gladys was born in Winthrop, Mass., where she resided until '63. A graduate of Winthrop High, Gladys graduated from the School of City Planning. She was employed by the City of Cambridge until '53 when she moved to the Boston Planning Board where she worked actively on the preservation of old buildings, notably the Old Corner Book Store at Washington and School Streets. Gladys leaves her husband, Paul, and a brother, Gilbert, of Needham to whom we extend the class' deepest sympathy. . . . **Don Strang** of Fort Wayne, Ind., has been appointed manager of small distribution transformer engineering at General Electric's distribution transformer plant in Pittsfield, Mass. Don, a native of Schenectady, N.Y., has been with G.E. since '47. . . . **Dr. Jay W. Forrester** continues to make the news services! Jay's latest is a paper entitled "Social Structure and Motivation for Reducing Research Costs" before the Industrial Research Institute earlier this year. . . . **The Roger Barts**, formerly of Weston, Conn., have moved to Princeton, N.J.; we suspect that Roger has moved from his Director of Research position at West Virginia Pulp and Paper.

Since the news department is thin we shall turn to 20th Reunion questionnaires, ever hopeful that the mention of a long lost friend will provoke attention on your part to your Secretary's never ending pleas for news! . . . **Robert W. (Bob) Hallock** has, in recent years at least, had a European career with General Motors, although he has just returned to his old home in Oyster Bay, L.I. In the early '60s Bob was Sales Manager at General Motors Suisse in Biel/Bienne, Switzerland, while the past three years have been spent in Vienna as managing director of G.M. Austria. Bob married the former Evelyn Orde in '45; they have two children: Bob, Jr., born in November 1946, and Diane, born in November 1948. Please give us a call Bob when you get into the city. . . . **Phil Pocock** whom we have not seen since '55 now can be reached at Expo 67, Place Ville Marie, in Montreal.

Those of us attending last June's reunion were disappointed that **Bob** and **Ginny Hildebrand** of Seattle were not able to join us as they had initially anticipated. After a year in California as a Sloan Fellow back in '62 or '63, Hildy returned to Boeing in Seattle, where he is a development program manager in the Aero Space



Division. Ginny, nee Virginia Ferguson, as most of you know, was a Tech coed, Class of 1947. They have three children: Bruce, born in July '50, David in June '53, and Susan in September '56.

**Pete Agoston**, after several years in the Groton-New London, Conn., area recently moved to Scarsdale, N.Y., from where he commutes daily to Charles Pfizer's headquarters on 42nd Street in Manhattan, specializing in production. Mrs. Agoston is the former Eva Hochner, Wooster College '50. They have four children: Steven, born in February '54, Thomas in June '57, Susie in May '60, and Margie in October '62. . . . **Otto Altenburg** is, undoubtedly, just one of many in the ole family business; however, we are certain that he is the only classmate in the music business! Altenburg Piano House is a 118 year old business in Elizabeth, N.J., merchandising pianos and organs. Otto and Nancy, nee Ebersole, have three children: Barbara, age 13; Otto, 10; and Elizabeth 6½. . . . You will recall our quoting **George "Curly" Bickford's** reunion telegram in a recent issue. George and Betty, nee Sowles, Dennison '46, spend their time rebuilding an old house in the charming community of Scottsville, N.Y. We trust that the kids—Susan, 15; Palma, 12; and Bob, 9—carry their share of the burden! Oh yes, Curly does spend some time each week at Taylor Instrument in Rochester as a supervisor, processing and estimating.

**Bill Blitzer** continues to be our only commuter in reverse. As you careful attentive readers know, Bill commutes to Larchmont Yacht Club each weekend to successfully race his Rhodes-19; the balance of the week Bill commutes from Greenwich Village to Lightolier, Inc. in Jersey City, N.J., where he is vice-president, Product Design and Engineering. Yes, those light fixtures you so often admire may well be the product of Bill's imagination. Bill serves as a trustee for both the Bank Street College of Education and the University Settlement, also as Secretary, Citizens Housing and Planning Council of New York. Daniel, Jonathan and Emily, 14, 12 and 7, respectively, keep Mrs. Blitzer, the former Judith Lambert, Carnegie Tech '48, away from the Fifth Avenue shops! . . . **Chris Boland**, whom we see quite often, together with Jean and their six children, continues to reside in Greenwich, Conn., although Jean, I suspect, often wonders why! Yes, you guessed—Chris is on the road altogether too much of the time! After several years as a Kidder, Peabody security analyst specializing in the chemical industry, Chris now heads Kidder's International Department. Chris is vice-president—international, selling American securities overseas with offices in London, Paris, Geneva and Hong Kong. I might add that the European officers and clients receive far better treatment than those in the Far East.

The questionnaire of **Bob Lohman**, technical director, Re-entry Vehicles and Manned Spacecraft at Martin in Baltimore was most interesting. Bob completed the questionnaire, but his wife, nee Kathleen McCloghine, Radcliffe '45, filled in the birth dates of Bob and Sarah, now 11 and

8! . . . In the same vein we might add that **Tom Markey** openly admitted that only wives know dates of birth. Tom, after many years in St. Louis, joined B. Heller and Company of Chicago in early 1965 as director of sales and marketing. Heller manufactures spices, seasonings, currying agents, and other items for the meat and food industry. Tom reports that his wife, the former Alice Daley, Trinity, Washington, D.C., '53, was a staunch Goldwater booster and worker in '64. There are three children—Tom, Jr., 5; Alice, 3; and Hugh, 1.—**C. H. Springer**, Secretary, Firemen's Mutual Insurance Company, 420 Lexington Avenue, New York, N.Y. 10017

## '46

Unfortunately this column must be written two months ahead of publication date, and the reunion registration mailing is just now coming out. Our deadline won't permit waiting for the returns to start rolling in, but we know from the early expressions of interest that the event at Provincetown from June 10 to 12 will be a sell out. If you haven't previously signed up but now wish to, perhaps you should call **Ted Henning** by phone to avoid any last minute confusion. Ted lives at 32 Woodedge Road, Manhasset, L.I., N.Y. . . . We are happy to report the election of **Kenneth N. Davis, Jr.**, as a vice-president of IBM. Ken joined IBM in 1949, was elected controller in 1961 and treasurer of the corporation in 1963. Ken and his wife and three children live in Pound Ridge, N.Y. . . . **W. Donald Nolte**, who lives at 96 Red Oak Road, Fairfield, Conn., was recently promoted to assistant to the vice-president of manufacturing at the Dictaphone Corporation. Don has been with Dictaphone since 1963. Prior to his advancement he was director of manufacturing controls. Before joining Dictaphone he served with the Hammerlund Manufacturing Company as vice-president and as a member of its board of directors. Don is a member of the Society for the Advancement of Management and the American Society of Quality Control.

**David C. Sherrick** has left his job of manager of marketing for Philco's Systems Technology Center to become director of market research and product planning for Rixon Electronics, Inc., Silver Springs, Md. Dave is active in communications and engineering groups, serving as president of the National Capitol Chapter of the Independent Telephone Pioneer Association and a member of AAAS, AFCEA, AUSA, AOA and the National Broadcasters Club. . . . After winning five local and regional speech contests, **Daniel M. Kelley** was one of eight finalists in Toastmasters International's national speech contest held last summer in New York. Dan is advertising sales manager of McGraw-Hill's four publications in the health care field, and he and Lilyan and their four daughters live at 525 Vine Ave., Park Ridge, Ill. . . . **Kenneth W. Patrick**, recently President of Consolidated Systems corporation, has become general manager of the Electro-Op-

tical division of the Perkin-Elmer Corporation.

We have a few address changes to report before closing. Comdr. **Guy G. Wooten**, 325 Cherrywood Dr., Fairlawn, Ohio 45324; Professor **Robert G. Wilson**, Apt 6B, 4040 San Felipe, Houston, Texas 77027; **Marshall P. Tulin**, 8031 Park Lane, Bethesda, Md. 20014; **William J. Street**, 73 Seneca Drive, Pittsburgh, Pa. 15228; **Eugene P. Ryan**, 381 Montgomery Ave., Wynnewood, Pa. 19096; **Seward J. Kennedy**, Mobile Europe Inc., 14/16 Regent St., London SW1 England; **Robert W. Kolb**, Dominion Textile Co. Ltd., 1950 Sherbrooke St. West, Montreal, Quebec, Canada; Dr. **Roger Bart**, 1021 Princeton Pike, Princeton, N.Y. 08540; and **George S. Ahmuty**, Allis and George Inc., PO Box 94, Westport, Conn. 06881. That is all the news we have for now. See you all at the reunion.—**John A. Maynard**, Secretary, 25 Pheasant Lane, North Oaks, St. Paul Minn. 55110

## '48

Well, 1966 has gotten underway in a wonderful, glorious way, at least from your scribe's point of view; and our pleas for letters, notes or cards have started to pay dividends. **Bob Mott** happily received two letters this past month (March), but unfortunately, they arrived after he had sent in the notes for the May issue. Hence, he forwarded them to me, and I take great pleasure in reporting them to you. . . . The first epistle came from **Mike Kami**, XV, who is more than enthusiastic about his work and activities. He writes, ". . . The job of vice-president of Corporate Planning for Xerox Corporation is fascinating because Xerox is the fastest and most dynamic company in the world. In addition to my work, I have a few other business activities such as serving on the Boards of Directors of the Pantasote Company in Passaic, N.J., and the Rodney Hunt Machinery Company of Orange, Mass. My civic activities are confined to the Boards of The Rochester General Hospital and The Starr King School for the Ministry in Berkeley, Calif. While we hibernate during the winter, the entire family loves water sports and we look forward to cruising and sailing and diving in the Great Lakes." Mike resides with his wife, Kay, and their two children, Gail (10), and Jim (8), at 14 Larwood Drive, Rochester, N.Y. 14618

The second letter was from **Ed Frohling**, III, who enclosed a release about his recent election as vice-president of business development for the U.S. and Latin America of the Parsons-Jurden Corporation of New York, a subsidiary of The Ralph M. Parsons Company. Parsons is one of the 10 largest engineering-construction firms in the U.S. Before joining Parsons-Jurden in 1962, Ed was formerly employed by Climax-Molybdenum Company from 1948 to 1951 and Western-Knapp Engineering Company from 1951 to 1962. He is a member of AIME, The Mining Club of New York, the Mining and Metallurgical Society of America, and the Canadian In-

stitute of Mining and Metallurgy. A native of Princeton, Ed resides with his wife, the former Diane Corse, and their three children in Manhattan.

Our congratulations to both Mike and Ed, and our best wishes for their continued success. Our modest Secretary very rarely includes any information about himself or his activities in these notes. So an added bonus with the above correspondence were copies of Bob's acknowledgements to Mike and Ed which included some pertinent information: "... I continue to enjoy life as a mathematics teacher here at Kent. Right now, my outside activities are largely confined to my responsibilities as President of the Association of Teachers of Mathematics in New England and as chairman for a joint ATMNE-National Council (of Teachers of Mathematics) two-day meeting to be held in Hartford next November. I haven't skied as much as I'd like to the last two winters, being in Connecticut instead of Maine, but I do ski enough to hang onto my amateur standing. . . ." and also the fact that Bob's "... brother Gil . . . is also with Parsons-Jurden . . ." I am quite certain that Bob doesn't mind my sharing such information with you. Our wholehearted thanks and appreciation to Mike and Ed for their contributions to the Class Notes. As Bob said to them, we "wish more of the class would take the time to drop . . . (us) . . . a line or two about themselves."

**Dean Ammer**, XV, a professor at Northeastern University and director of NU's Bureau of Business and Economics Research, is the author and editor of a new paperback text for high school students in economics and social science. The emphasis of the text, which is published by Ginn and Company, is on modern economics and problem situations taken from a wide variety of viewpoints, including conservative and liberal journals. . . . In the December notes, we mentioned an article in *The Boston Traveler* concerning **Izzy Candeub**, IV, MCP. His reputation and journalistic popularity are growing by leaps and bounds, for the January issue of *Architectural & Engineering News* devoted a full-page profile, with photo, to him and the widespread activities of his firm, Candeub, Fleissig, Adley and Associates (which is presently working on over 350 planning projects from Anchorage to Wheeling). . . . Techmen are noted for reaching outward into other areas of responsible endeavor in addition to their professional work, and **Frank Durgin**, XVI, is no exception. A page-one story in the January 27 issue of the *Belmont (Mass.) Herald* headlines that "Frank H. Durgin Announces Candidacy For School Board." The story then goes on to state that Frank is a town meeting member from Precinct 4 and is currently president of the Daniel Butler PTA and an active member both of the PTA Council and its curriculum committee. In announcing his candidacy, Frank said among other things that "I am a hard worker with sincere interest. I promise an energetic doorbell-ringing campaign." Although an engineer, Frank shows signs of being a good politician as well. Since 1964, he has been project engineer at M.I.T.'s Aerolastic and

Structures Research Laboratory. Married and the father of five children (John, 11, Jane, 9, Laura, 8, Sally, 5, and Frank III), Frank lives with his wife and family at 151 Lexington Street, Belmont, Mass. . . . At an industrial administration symposium held at Union College on March 18, **Armand Feigenbaum**, XV-S.M., XIV-Ph.D., presented the opening paper, which was entitled, "The Problem and Its Setting." Armand is manager of manufacturing and quality control for General Electric in New York City. The symposium was sponsored by the Union College Industrial Administration Program and the college's Industrial Administration Advisory Council, of which Armand is a member. He took his bachelor's degree at Union before coming to Tech for his graduate work. He has written several articles in the fields of administration, management training, industrial economics, and management programming and is the author of three books, *Total Quality Control—Engineering and Management*, published by McGraw-Hill, *Management Programming* to be published by John Wiley, and *The Organization Process* to be published by McGraw-Hill. . . . Our heartiest congratulations go to **Herb Kindler**, II, on his recent promotion and appointment as Executive Director of the Instrument Society of America. Herb joined the ISA headquarters staff in 1956 as Director of Technical Operations and served successively as Director of Technical and Educational Operations, Assistant Executive Director, and Director of Society Operations. Earlier, he served as chief of gasoline plant engineering for Black, Sivalls & Bryson, Inc. in Oklahoma City and previous to that was employed by Catalytic Construction Company and Honeywell, Inc. in Philadelphia. A registered professional engineer and holder of patents in electronic potentiometry and mass flow measurement, Herb is author of the book, "Organizing the Technical Conference," published by Reinhold Publishing Co. . . . **Charlie Shipman**, X, spoke on "The Mechanics of an Upside-Down Education" at the February 16 meeting of the Worcester County Chapter of the Worcester Polytechnic Institute. He has been a member of the WPI faculty since 1958 and is now professor of chemical engineering. After being graduated with our class, he remained at Tech to take his S.M. and Sc.D. in chemical engineering. . . . Among the newspaper clippings received this month is one which is truly "clipped" in that the first part of it is missing. All we have is that **Alex Weinstein**, IV-A, MAR, has accepted the task of leading the Men's Division (of which organization we don't know). Let's hope that Alex reads this and drops us a line to clear up the mystery. The only clue we have is that the clipping says that one of the reasons he accepted the job "is that he 'was stirred by an on-the-spot view of the plight of Israel's refugees,' when he visited Israel recently." The Alumni Directory says that Alex is associated with the firm of Steele, Weinstein and Associates, 252 Aquila Court, Omaha, Neb.

In closing, we wish to express again our sincere appreciation to Mike Kami and Ed Frohling for taking the time to drop us a

few lines about their recent activities. We trust their "seed" letters will bring forth a veritable harvest of letters from many, many more of you. So don't disappoint us; take a moment right now to write Bob, Dick or myself. You'll feel wonderfully happy, and we will, too.—**John T. Reid**, Assistant Secretary, 22 West Bryant Avenue, Springfield, N.J. 07081; **Robert R. Mott**, Secretary, Kent School, Kent, Conn. 06757; **Richard V. Baum**, Assistant Secretary, 1718 East Rancho Drive, Phoenix, Ariz. 85016

## '49

**Dr. Weston E. Vivian** is a member of the House Committee on Science and Astronautics. As a Doctor of Science in Electronics, he brings to his committee assignment engineering insight not often found among legislators. Speaking as a scientist and member of the House Space Committee, his remarks on the space race compel attention: "We need to match the Russians in technology. But we also need to be sure that the people throughout the world know that a democratic and industrial country run on the free enterprise system can work as well as the communist system." Discussing the economics of the program, he said that the principal benefits had come from weather and upper air research, relay and communications satellites, and technological fall-out useful in areas not related to space. . . . **Stanwood K. Bolton** is an adjuster for the Factory Mutual Engineering Division in Norwood, Mass. This company handles industrial fire insurance. In private, however, Stan is a poet. One of his poems appears in the Winter 1965 issue of the *Midwest Quarterly* published at Kansas State College in Pittsburg, Kansas. He lives in West Acton, Mass.

**Robert L. Hendrick** is a senior research scientist at the Travelers Research Center in Hartford, Conn. Basically, the center is concerned with the study of environmental problems—both natural and man-made. It seeks to know what the world will be like 20 or 30 years from now and tries to show what steps must be taken to avoid disastrous trends. Bob spoke to seniors of Winsor (Conn.) High School on "Science and the Quality of Environment." In his position at the Travelers Research Center, Bob is responsible for the development of new scientific programs involving systems approaches to resource problems. It is also his responsibility to write and to coordinate the production of research proposals and to assist in department marketing and development activities. Dr. Robert M. White was formerly president of the Research Center but left in 1963 to become head of the U.S. Weather Bureau. . . . **Maurice W. Smith** is a director and engineer for TOR Service, Inc., Dallas, Texas, specializing in well ignition work. After graduation in Course X, he worked for Texaco in varied petroleum engineering capacities. Since 1958, he has been in the field of thermal recovery in Kansas and prior to joining TOR in July, 1965, he was chief petroleum



engineer for Layton Oil Company of Independence, Kansas.

One of the nice things about a reunion is that the questionnaires which are usually a part of the grand strategy are not only the basis for some fun but also provide grist for the secretary's mill for many a moon. Herewith more gleanings from the stack: **Joe Schneider** and his wife Eunice live with their two children Lisa and Lynne at 193 Hobart Road in Chestnut Hill, Mass. Joe has gained 30 pounds since graduation and can do half a push-up. He has his own consulting engineering company and travels 75,000 miles a year on business. . . . **Paul Reynolds** and his wife Helen came all the way from San Francisco to the reunion. Paul works for the Bechtel Corporation, which presumably is in the field of building construction since Paul says he is working in the field he studied at Tech. Paul's hobby is "keeping ahead of expenses." . . . **John Munya**, Lisa, and **John Miller, Jr.**, live in Wilmette, Ill., where John is a district sales manager for the Formica Corporation. Evidently John has not been in Wilmette for very long because the Alumni Register lists his address as being here in Massachusetts and his questionnaire states that he was a member of the Industrial Commission and Chairman of the Planning Board in Canton, Mass. John was the only one who put a question mark after the question "Do you contemplate starting your own business within the next five years?" One might infer that his mind was open on the subject. John, if you have started your own business by now, we wish you the best of luck. . . . **Gregor Meyer** lives in Pittsburgh, Pa., with his wife and children Lisa, Gregor, and John who at the time of the reunion was only 6 weeks old. I'm sorry I can't list Mrs. Meyer's first name because it is missing. Gregor is both a lawyer and a banker. He is a member of the firm of Meyer & Flaherty in Pittsburgh and chairman of the board of the East End Federal Savings and Loan Association. . . . **Demetre Ligor** and wife Pam live with their children Michael, Norma, and Andrew in Medford, Mass. Demetre is a field engineer with Applied Measurements, Inc., of which he is a principal owner. He has hired 300-400 people while traveling 25 go along the way. . . . **Ed Somma** and wife Vera live in Middlebury, Conn. They have a daughter, Patricia Ann. Ed is a life underwriter with the Connecticut General Life Insurance Company. Like many classmates, Ed is not in the field he studied for (Course II). He keeps up in his new field by working for the C.L.U. Ed had hired 50 and fired 10 and was travelling 12,000 miles a year on business at the time of the reunion. His wife stated that if they had any sons she would not particularly want them to go to M.I.T. but instead would want them to get into law or medicine. . . . **Herb and Gloria Spivack** live in Cranston, R.I., with children Elaine and Robert. Herb is president and treasurer of Metachem Resins Corporation. He is not sure how many people he has hired nor whether he has ulcers. He does clearly remember giving three employees their freedom, however. Like many couples, the Spivacks reported that they had stopped

smoking. This may help to account for some of the forty pounds that Herb has gained since school.—**Fletcher Eaton**, Secretary, 42 Perry Drive, Needham, Mass. 02192

## '50

**J. W. Geiser** has been elected a vice-president of West Penn Power Company. He has assumed executive responsibility for the company's power generation and related functions. He joined West Penn Power in 1950. During his first nine years with the company he worked in power station engineering at its Springdale power station and general office, and spent a year at the Oak Ridge (Tenn.) School of Reactor Technology. In 1959 he was promoted to assistant manager of research and development; in 1962 to assistant to the vice-president, engineering; and in 1963 to director of engineering; he was elected an assistant vice-president in 1964. He is active in a number of professional nuclear and engineering organizations, and in electric industry research and study groups. . . . **Joe Wilton** has been appointed to the quality control division of Allegheny Ludlum Steel Corporation. Joe was previously with Wallingford Steel Company. He joined Wallingford in 1950 and now will relocate in Pittsburgh with his wife and six children. . . . **Mark H. Baxter** has been promoted to vice-president of The First National Bank of Chicago. After serving in the U.S. Air Force, Mark joined the bank's auditing department. He was advanced to assistant cashier in 1956 and promoted to assistant vice-president in 1962. Mark is a member of the University Club of Chicago, the Chicago Yacht Club, and the Economic Club of Chicago. He, his wife, and their three children live at 537 Earlston Road in Kenilworth.

**Dave Marcus** has made his way back to Boston and after five years of enjoyment has gone into business for himself as an electronic manufacturers' representative, so anyone who can help him out can find him problem-solving in Natick. Among his other problems are Bruce, 10; Harold, eight; and Diana, five. To demonstrate how wild kids are these days, he tells me that his eight year old wants to go to Harvard and play football! . . . **Paul Kruger** is also enjoying himself but in his case he has a new course he's playing around with called Nuclear Civil Engineering. It sounds to me as if he is planting nuclear bombs under our new highways or something like that! He is an associate professor of Nuclear Chemistry at Stanford University. For those of you who are interested in such things you could write to him about his course which includes: "The use of nuclear explosions for civil engineering applications and the technology of contained and cratering nuclear explosions." . . . Major **Bob Geiss** was recently awarded the U.S. Air Force Commendation Medal for meritorious achievement as project officer at the Space Systems Division at the Los Angeles Air Force Station. He was cited for his pro-

fessionalism in the development and the publication of the Air Force Space Planners' Guide.—**Gabriel N. Stilian**, Secretary, 4 Biscayne Dr., Huntington, L.I., N.Y.

## '51

Here it is June—the 15th Reunion only days away—I hope that none of you are left out. Ellie and I drove down to Chatham in March for a short vacation and scouted the hotel; they have really done quite a lot of redecorating and have built up the beach and the "Inner Bar" bar, as you have probably noticed in the brochure that went out with the April mailing. \$5.00 reserves your place and the weekend can be had for as little as \$29.95 including the clambake!

In addition to the Alumni Fund Vice-chairmen that I listed last month, the names of two additional members of the class who are helping to organize regions have been forwarded to me: **Edward C. Finnegan**, Allentown, Pa. (his second year), and **Thomas P. E. Kelly, Jr.**, Fitchburg, Mass. . . . Before I get too far along I must print an apology: **Julian Bussgang** has been the victim of my typographical errors and an occasional misquote. He is actually the president of Signatron, Inc. in Lexington, Mass., and he resides in Lexington where he is president of his neighborhood community association. Sorry about those errors, Julien. . . . Two of our classmates who are also faculty members at Tech are in the news so often that it is difficult to present any one thing new about them. **Mert Flemings** is about the most prolific author of technical articles and when he is not publishing he is receiving an honor or delivering an honorary lecture; his most recent was the Sauveur Memorial Lecture for the American Society for Metals. . . . **Charles Miller**, Civil Engineering Department Head, is widely quoted for his knowledge on transportation problems and for the use of computers in solving traffic and construction problems. Among recent honors: Fellow of the American Academy of Arts and Sciences and member of the Latin American Science Board of the Academy of Science. Both Mert and Chuck are among the 560 plus alumni that dwell in Lexington, Mass. . . . **Ralph Evans** spent a pleasant vacation in Puerto Rico and Florida this winter. Ralph is with the Naval Underwater Sound Lab in New London, Conn. as sonar design review engineer. . . . **George Gatter**, who received a Master's in City Planning with our class, was appointed Executive Vice-president of the League to Save Lake Tahoe. George has been active in planning and conservation since 1949. . . . **Harold Glenzel** is district engineer for New England Telephone Company in Fitchburg, Mass. He and Lois (Dickson) have two children.

Every now and then I receive the type of note dear to every class secretary's heart—long notes chock full of news. This month's is from **Herb and Ruth Graham**; my only regret is that I can't publish it in its entirety, but here are some of



the highlights. Herb spent a year at the Harvard 'B' School and then went to General Dynamics, Pomona, where he remained for three years. Subsequently he joined Northrup's Norair Division and has been there for over three years now. His concern is new product development and he has changed his specialty from aerodynamics to systems engineering. Herb mentioned that he had lunch with **Lou Tedeschi** recently and sees **Henry Jex** on occasion. The **Grahams** recently moved into a new house in Los Angeles which, they say, overlooks a drive-in movie. Herb went on to say that they never watch the screen because they cannot hear the sound. I have repeated this here in hopes that some of you electronic geniuses might be able to help him out. Herb and Ruth have three children, Collette, David and Kathy, eight, five, and three respectively. The **Grahams** find a great deal of satisfaction in church work and serve as counselors to the College 'N' Career Group as well as teachers in the Sunday School and Bible classes in hopes that it will aid young people to find purpose in their lives. Thank you Herb, for the nice letter. . . . **Marvin Grossman** moved about nine months ago and finally got around to sending in some news. He is president of Grossman Sales, Inc., and is now living in Waban, Mass. He and Joanne have three youngsters: two girls and a boy. Marvin's gross news consisted of: "When and where is the reunion?" and "Let's have lunch sometime." I met him for lunch and now we're turning out reunion mailings together—the moral is the same as it was in the army: don't volunteer and don't question progress or you'll end up in charge—at least he paid for the lunch. . . . **John F. Hennessy, Jr.**, lives in New Canaan, Conn., and boasts of five boys and a girl. His M.I.T. activities are professional as well as on a voluntary basis: in addition to being on the area M.I.T. Educational Council John has designed the mechanical and electrical systems for many of the Institute's new buildings including the new Boat House, Life Sciences Building, the Management and Social Sciences Building, and the Student Center. . . . **Ernest F. Jensen** is treasurer of Tridair Industries, Redondo Beach, Calif. Ernest also holds an M.B.A. from the school up the river. . . . **William Krivsky** is administrative vice-president of Continental Copper and Steel Industries, Inc., in New York. . . . **Gilbert Lewis** is living in Bethesda, Md. He is with Lewis and Sons, Manufacturers Representatives. Gil is currently president of the M.I.T. Club of Washington, D.C. . . . **Daniel Macero** is an associate professor at Syracuse. After his Bachelor's degree from Tech Dan received a Master's from U. of Vermont (1953), and a Ph.D. from Michigan (1958). . . . **Gerald Moore** was appointed manager of computer sales of the Cologne and Munich offices of Digital Equipment Corporation. He and his wife and six children moved to Europe in January. . . . Sometimes I don't realize either how old my news is or how fast some people progress. I have two press releases less than a year apart informing us first that Dr. **Robert L. Richards, Jr.**, was made assistant plant

manager of the Clinton, Iowa, Du Pont Cellophane plant after working his way up from the research lab in the film department, and then that he has been elevated to the post of plant manager of the Du Pont Florence Plant. . . . **Howard L. (Lew) Schaeffer** is living in Richardson, Texas, is married and has three children. . . . **Roger Schonewald** is chief development engineer with the Cryogenerators Division of North American Philips. He and Viola have two boys and a very young daughter (the successful third attempt) and live in Cumberland, R.I. . . . **Carl P. Schumacher** is operations supervisor in the agricultural division of Monsanto. He has served with Monsanto in various capacities since 1951. . . . **Gordon** and **Jean Shaw** are living in Dayton, Ohio, have two boys and a like number of girls. Gordon is field sales engineer for Litton Industries. . . . **Thomas Stansfield** is also living in Dayton, and is still with National Cash Register. . . . Under an article entitled "Don't Send A Man, Send A Robot" we have learned that Dr. **Walter Stahl** is at the Regional Primate Center, Beavertown, Ore., where he simulates life cycles of various cells. He simulates these cycles by using a computer, which represents a new approach to biology. . . . **Lloyd Smiley** started his own consulting firm in distribution and marketing and has 12 blue chip clients as well as his own Bonanza which he flies for business purposes. Lloyd is considered a pioneer in unitized distribution and is widely known for his palletized shopping program at General Foods Corporation. He and Connie live in Poughkeepsie, N.Y. and have four children, the oldest of whom, Catherine, 17, entered Trinity this past fall and wants to major in math and go to the M.I.T. Graduate School. . . . **Len Taigman** is manager, new business management, of the Martin Company, Denver Division. He and Jo have three children and all love to ski. . . . **Anthony Winfisky** is acting chairman of the Fine Arts Department at Salem (Mass.) State College. He is a doctoral candidate at Boston University and was recently on the Summer Language Institute Program at Dartmouth (with Russian as his language). Tony has started a family antique mail order enterprise called "The Three Bears." . . . Hope we'll see you all in Chatham shortly. Would you believe that 90% of the class is planning to attend the 15th Reunion?—would you believe 50%?—how about 25% and some miscellaneous professors! Be there and count them yourself, we should set some new records!—**Howard L. Livingston**, Secretary-Treasurer, 358 Emerson Road, Lexington, Mass. 02173; **Forest Monkman**, Assistant Secretary-Treasurer, 6331 Beverly Drive, Mission Kansas; **Fred Aldrich**, Reunion Chairman, 39 York Street, Lexington, Mass. 02173

'52

**Jim Davidson** scooped me with half of my items. **Doug Haven** will pick up things I may have missed. **Al Kandel** has

joined Servomechanisms Inc. in Nashua as special assistant to the executive vice-president. . . . **Bob Woods** is now in charge of Information Processing at Sanders. . . . **Nathan Sivin** dropped by last week. He is teaching Chinese Literature and Philosophy of Science at M.I.T. after receiving his Ph.D. at Harvard. . . . **Herb Teager** has been appointed professor of medicine at B.U. . . . **Roy Axford** is an associate professor at Northwestern, where he teaches Nuclear Engineering. . . . **Joe Kotrich** has moved back to Chicago where he is covering the Midwest for RCA Semiconductors. . . . **Jerry Pickett** is running for the Planning Board in Bedford, Mass. . . . **Werner Sievers** has been made head of the Radar Design Department at MITRE. . . . **Richard DuBois** has been named "Engineer of the Year" for 1966 for the State of Vermont. His firm, DuBois and King, is active in the practice of sanitary engineering and water resource development.

Many among the Class have been active in fund-raising for M.I.T. **Harry Kradjian**, **Milo Backus**, and **Jim Stolley** directed the areas of Binghamton, Dallas-Ft. Worth, and Erie, respectively, in the Alumni Fund fall Special Gifts campaign. **Jack Coughlan** and **Frank Hyson** served as Class Chairmen in Boston and New York, respectively, during the same campaign. Others of us are serving now as Alumni Fund Regional Chairmen: **Mike Goldman** in Phoenix; **George Jordan** in Fairfield; **Bill Moss** in Atlanta; **Sheldon Thorpe** in Park Ridge; **Jack Copenhaver** in Louisville; **Dave Weiss** in Silver Spring; **Brad Schofield** in Belmont (Mass.); **Ben Olson** in Dover (Mass.); **Arnie A. Kramer** in Worcester; **John Prizer** in Birmingham (Mich.); **Phil Sperling** in Cranford (N.J.); **Henry Hohorst** in Scarsdale; **Ted DeMoss** in Reading, Pa. Although many others are assisting in different capacities, we seem to be shy of the mark as far as numbers of contributors to the Fund go. As of March 21, response was 27%. Certainly we can do better. If you are reading these notes, chances are that you are already "in" for the current year which ends in June. Won't you pass the word to others who don't get the Review? Tell them that their \$10, \$50, or \$500 will bring them, besides the magazine, the satisfaction of returning part to M.I.T. of what we took away from it nearly 14 years ago.

**Stan Buchin**, who is at the Harvard Business School, is chairman of the Nominating Committee for Class Officers. He would like to receive nominations so that they may be considered well before the actual election takes place next year, at our Reunion. . . . **Doug Haven** and (so far) a small committee that is beginning to plan the Fifteenth Reunion are looking for those who are interested and willing to help out. If you qualify, please drop Doug a note saying so. He is in Room E19-439 at M.I.T. I am still at Northwestern in the Department of Industrial Engineering. If you come to Chicago or land at O'Hare, give me a call at Northwestern (492-3667) or at home in Evanston.—**Gus Rath**, Visiting Secretary, 323 Hamilton St., Evanston, Ill.; **Dana M. Ferguson**, Secretary, P.O. Box 233, 242 Great Rd., Acton, Mass.

It is about time for another Alumni Day and from preliminary indications, it should offer an interesting program as well as an opportunity to meet old friends. Those of you who are planning to make the trip back to Cambridge are invited to drop in for a visit with Joan and myself. Our phone number is UNIVERSITY 4-0218. . . . I recently ran into Dana Ferguson, '52, on the West Coast. Dana was on his way to Tahiti to find out if all those stories are true! There aren't many bachelors left and Dana is out to prove that it is not a bad way of life after all. . . . **Gil Gardner, IXA**, is completing a six month special assignment in Vietnam. Hope you will be with us on June 13th, Gil! . . . The yearly "progress" report from **Grayce Hess**, indicates that **Sid** is still active with operations research at Atlas Chemical, his scout troop, and teaching at Drexel Institute of Technology. Off hour work on political redistricting and reapportionment by computer has been stimulated by a \$96,000 grant from the Ford Foundation and National Municipal League. Sid shares this with four other engineers and operations researchers at Atlas and DuPont. Their objective is to develop an efficient, nonpartisan computer districting technique by the 1970 census and thereby avoid gerrymandering and possible political impasse. This interesting work is described in some detail in the November, 1965, issue of *Scientific American*.

We have received some changes of address from the Alumni Association: **Arthur B. Cicero**, 11 Cooke Rd., Lexington, Mass. 02173; **Benjamin P. Coe**, 1169 Ardsley Rd., Schenectady, N.Y. 12308; **Charles F. Fenn, Jr.**, 43 West 84th St., New York, N.Y. 10024; Captain **Gilbert D. Gardner**, 35 Patterson Rd., Bedford, Mass. 01730; Comdr. **Melvin T. Gardner**, 2225 Webster Ave., Ottawa, Ont., Canada; Dr. **Rudolf E. Kalman**, 160 Eleanor Dr., Woodside, Calif. 94062; Dr. **Bruce C. Murray**, 1535 Sierra Madre Villa Ave., Pasadena, Calif. 91107; Dr. **Richard W. Safford**, Apt. 44, 1558 Mass. Ave., Cambridge, Mass. 02138; **Donald F. Shingler**, 536 Platt Circle, Melbourne, Fla. 32901; **David M. Stern**, 516 Baird Rd., Merion Station, Pa. 19066. . . . Don't forget Alumni Day, June 13.—**Norman R. Gardner**, Secretary, 100 Memorial Drive, Cambridge, Mass.

Only a little news this month—may I suggest that you all sharpen your pencils and write a short note to your Secretary. **Manuel Alarcon, VI**, spoke to the Mentor, Ohio, PTA concerning the political situation in Cuba. Manuel served briefly in the Castro cabinet in the early period when most Cubans saw the new government as a saviour from the Batista government. . . . **Joseph W. Hurley, II**, has been appointed assistant to the manager of manufacturing in the Technical Prod-

ucts Division of the Corning Glass Works in Corning, N.Y. He and his wife and four children live in Corning, to which they moved in 1960 from Harrodsburg, Ky. . . . **John H. Auten** whose graduate degree was in economics has become the Director of the U.S. Treasury's Office of Financial Analysis. Prior to joining the Treasury in 1963, John had been in the economics department of Rice University. . . . One of the speakers at the North Carolina meetings of the A.I.A. was **Paul Spreiregen, IV**. He is the author of *Urban Design: The Architecture of Towns and Cities*.

A number of our classmates have been active this past year in Institute-related activities. **Demetrios J. Athan, IV**, is secretary-treasurer of the M.I.T. Club of Central Florida. . . . **Mariano Aveledo, VI**, is secretary of the M.I.T. Club of Venezuela. . . . **Ezra D. Ehrenkrantz** is an alumni representative on the corporation visiting committee for course IV-A. . . . **Robert A. Fowler, IV**, is the president of the M.I.T. Alumni Association of Utah. . . . **Rolf Kates, VI-A**, is the first vice-president of the West Suburban M.I.T. Club . . . and **Steven E. Laurens, XV**, is the vice-president of the M.I.T. Club of Cincinnati. We also have our share of members of the Educational Council whose basic responsibility is to maintain friendly relations with local secondary schools and to interview prospective students. **Albert W. Bachelder, VI**, serves in New Haven, **Bert B. Beals, XV**, in Oklahoma City, **Robert J. Byer, XIII**, in Silver Springs, **C. Jerould Carpenter, I**, in Norfolk, **Philip Gilbert, VI-A**, in Los Angeles, **David N. Leslie, I**, in New York, **Harold W. Olsen, I**, in Washington, **A. William Rouzie, IV**, in Portland, Ore., **Duane Yorke, XVI**, in Long Island.—**Bob Evans**, Secretary, 43 High St., S. Acton, Mass., 01771

Just a few notes on classmates who received bachelor's degrees in 1955; then we'll do some catching up on those who terminated their graduate studies that year. **Don Evans**, who has received a doctorate from the University of Michigan, recently joined the Columbus Laboratories of Batelle Institute as a senior metallurgical engineer. . . . **Robert Cutkosky** is in Washington with the National Bureau of Standards. . . . **Paul Attridge** has been elected president of the Boston Board of Fire Underwriters. . . . **Bernard Klim** of Cambridge has been promoted to engineering supervisor at Polaroid. . . . **Bernhardt Wuensch** is assistant professor of ceramics at M.I.T., having received his faculty appointment and a Ford Postdoctoral Fellowship in September, 1964. He spent a year in Switzerland working in crystallography subsequent to completion of his doctorate in that field in 1963 at M.I.T. . . . **Henry Kendall** of Sharon, associate professor at M.I.T., a research group head in the nuclear science laboratory, has been named a

member of the corporation of the Museum of Science of Boston. . . . Also associate professor at M.I.T. in the School of Management is **Zenon Zannetos**. . . . **Joseph McNeill** is professor of engineering at the State University of New York Maritime College in the Bronx. . . . At Penn State **Gifford Albright** heads the Department of Architectural Engineering. . . . Last June Lt. Col. **Clyde Friar** was graduated from the Army War College at Carlisle Barracks, Pa., after a 10-month course. . . . **Robert Davis** is co-author of a handbook prepared recently by his firm, Chem Systems, Inc., consultants specializing in petrochemical plant projects.

**Peter Schultz** is with Aerospace Corporation in Los Angeles. . . . **Peter Kaufmann** is manufacturing manager for the Berkeley division of Beckman Instruments. . . . **Larry Kaufman** is director of research of ManLabs, Inc. . . . **Richard Lyon** was last year elected an assistant vice-president of Bolt, Beranek, and Newman in Cambridge, where he is manager of the applied physics department. . . . **Irvin Solt** is director of the microwave products group at Fairchild. . . . In Cleveland **William Prindle** is corporate director of research with Ferro Corporation. . . . **Robert Enzmann**, a senior staff scientist at Avco Research, is also lecturing at Northeastern in space sciences. . . . In Washington **Jack Scarborough** is assistant manager of utility programs of Nuclear Utility Services. . . . And far away **Calvin Chapman**, who turned to medicine after leaving M.I.T., is making news as Bien Hoa's Zone D doctor.—Co-secretaries: **Mrs. J. H. Venarde (Dell Lanier)**, 16 South Trail, Wilmington, Del. 19803; **L. Dennis Shapiro**, Aerospace Research, Inc., 130 Lincoln Street, Boston, Mass. 02135

The class profile questionnaire can be termed a success with 277 returned by mid-April. Already this is 50% ahead of the total received five years ago. The computer analysis team led by **Donald Bavy** has been hard at work preparing the detailed summary, but a superficial glance indicates the results will be as diverse as they are interesting. We hope to have a report in the mail by July. On the other hand, the dues payments have been disappointing, running behind the level five years ago. Believe me, the salary levels indicated in the profile are way ahead of 1961, so this does not correlate. Since the dues pay for the class mailings and publication of the questionnaire analysis, this presents a problem. All and any excess funds will accumulate towards eventual class gifts. . . . The 10th year reunion committee, led by **Bill Grinker**, has worked hard over the past year to assure the success of this month's gala affair at the Wychmere Harbor Club on Cape Cod. Undoubtedly, you have received several mailings on the subject by now, and we hope you have elected to join the group. Again, by mid-April, over 100



classmates had indicated a desire to attend and registration fee payments were beginning to arrive. . . . We owe a vote of thanks to the Alumni Association for acting as a central collection agency for the return mailings and to **Guy Spencer**, working at the Association and acting as liaison with the printing and mailing service to assure the smooth flow of information.—**Bruce B. Bredehoff**, Secretary, 16 Millbrook Road, Westwood, Mass. 02090

'57

I am writing this month's notes in London. I have been transferred here from New York by Mobil Oil to work in the planning group of the service company which co-ordinates all European operations. I will probably be here until August 1. My next move is not as yet finally determined. If any of you get over this way during the early part of the summer, please look me up. My residence is at 60, Glebe Place, London, S.W.3., just off Kings Road in the Chelsea section. My telephone number is FLA4899. My business address is Mobil Europe Inc., 14/16 Regent Street, London, S.W.1., just a few steps off Piccadilly Circus. I have a few extra beds which are available in case anyone gets caught here without a place to stay. Now for news from the mail bag. **Vic Klemas** dropped me the following note: "After working on satellite communication systems at GE—Valley Forge for four years, I received a GE stipend to study for my Ph.D. in Europe for three years. Just before leaving for Europe I married a Penn girl and we have two boys now. My research in Germany was in the area of optical communications—laser technology. Upon my return from Europe I accepted the position of manager, sensor technology, at the Missile and Space Division of GE at Valley Forge. We settled down in Devon, Pa., where we bought a home."

A note from **Harold Matheson** informs us that he is presently treasurer of Digitek Corporation, a 50-man computer software company specializing in compilers for systems such as Fortran, Jovial, and Simscript. . . . Before leaving New York, I had lunch with **Jack Safirstein**. He is now working with the Applied Science Division of Interpublic. Interpublic is part of the McCann Erickson Group. He and his wife live in Ardsley; they have one child. Jack told me that **Bob Gal** is now with Wakefern Foods (Shoprite chain) as assistant to the general manager. . . . **Robert Berg** has been appointed commodity sales manager for Naugatuck Chemical International. He will handle rubber chemicals in his new assignment. Bob joined U.S. Rubber, of which Naugatuck is a division, in 1960 as a technical sales representative. Bob now lives in Brooklyn with his wife and one child. . . . I have been very pleased to see the progress that has been made on plans for our 10th reunion. The Berkshires sound like an ideal spot for our get-together. I am looking forward to the reunion and hope that there are many of you who will

be able to get back. That is all for now. More news in 30 days. If you have any correspondence, please address me at the new address given below.—**Frederick L. Morefield**, Secretary, c/o John A. Morefield Company, 35, North 35th St., Camp Hill, Pa.

'58

Although this is the seventh monthly epistle I've written this year, we have only appeared in five issues because I have been shaving the news deadline too close in one case and the Review had a space limitation and held us over in the other. Send in more news so your secretary has no reason to miss an issue. . . . **Gary Blakely** married Marilynne Hughes in June, '65. She is a teacher. They are living in the San Francisco Bay area where Gary is with Hexcel. . . . **Dave** and **Mary Holt** now have three girls; the newest, Mary Frances, was born December 4, 1965. Dave received his Ph.D. from Cal Tech and is now an associate professor at Penn State. . . . **Ed Bell** has just been elected assistant treasurer of the M.I.T. Club of Southern California. He has been on the board of governors of the club for several years and last summer was appointed to the post. He is still with McKinsey and Company, management consultants in Los Angeles. He and Esther have two children and are living in Pasadena. . . . **Toni Schuman** has been elected assistant secretary of the local M.I.T. Club and writes "the class of '58 will someday do better than assistant! I am working as a consultant for a medium size manufacturing company that is installing data processing equipment. The job involves designing their entire system, from inventory control to billing and accounts receivable. And now I have been asked to reorganize the production process from scheduling the machine room to the assembly lines. After eight years I am back in mechanical engineering again."

In the new assignments column, **Stephen Shain** has taken a position in the Shell Development Company's exploration and production research division in Houston. Previously he was in the chemical engineering department at the Shell research center in Emeryville, Calif. In this new post, he will lead a group in the reservoir section of the division's exploration department. . . . **Herbert Calves** has been named by Ryerson Steel as machinery and work order sales representative for their Charlotte, N.C., service center.—**Michael E. Brose**, Secretary, 205 Pine Street, Tecumseh, Mich.; **Antonia D. Schuman**, Western Associate, 22400 Napa Street, Canoga Park, Calif.

'60

"**David Bleich**, XXI-B, reporting that my nose, hitherto large and unsightly, has become, after six years at the well-known

grindstone, small and unsightly, and the summit of all human achievement is now in sight within the next few months at New York University, whose English department will presumably sanction my product, 'The Psychology of Utopian Literature.' For withstanding this abrasive process, I have been quite fortunately rewarded with an assistant professorship in English at Indiana University starting next September, and I will thenceforward be a citizen of Bloomington, which, I am told, while having fewer loaves of Jewish rye bread than New York, has many more pagan trees. This is good, I guess, because my smaller nose will need fresher, more concentrated air." . . . Thanks for the news, David. . . . I have a list from the Alumni Association of the four members of the class of 1960 who are regional chairmen for the Alumni Fund this year. They are: **Tom Farquhar**, Wellesley, Mass.; **Fred Leonetti**, Portland, Ore.; **Art Silverman**, Manhattan, N.Y.; and **Warren Van Genderen**, Denver, Colo. Best of luck to all concerned. . . . I have a clipping from the IEEE Transactions Circuit Theory which shows a photo of **Ronald Rohrer**, mentions his S.B. from the Institute and tells us that he received the "M.S. and Ph.D. degrees from the University of California, Berkeley, in 1961 and 1963, respectively, all in electrical engineering. He was awarded both the Eitel McCullough Fellowship and a National Science Foundation Cooperative Fellowship in the course of his graduate studies at Berkeley. He acquired industrial experience during . . ." and at this point, the clipping is clipped, so that's all I can tell you about Ron. Can anyone fill in the blanks?

If any of you are passing through Boston during the summer months, give me a call and we'll have lots of news for the fall issues of the Review. You can get our home phone number from information, because it will be changing sometime in June or July. We are moving from Cambridge to (probably) Brookline or Newton—because our present apartment is right on the route of the infamous Inner Belt, and regardless of whether or not it eventually is or is not built, we're not going to wait for the results right here. During the day give me a call at the office—telephone 267-1328. Hope to see you at the Alumni Day festivities—or at least at some part of the festivities.—**Linda G. Sprague**, 345 Brookline Street, Cambridge, Mass. 02139

'62

**H. E. Cline** was co-author of a paper on "Superconductivity of a Composite of Fine Niobium Wires in Copper" from the Department of Metallurgy at M.I.T. . . . **Dr. Ralph R. Rumer, Jr.**, who earned his Doctor of Science degree at M.I.T. in 1962, was named acting head of the Department of Civil Engineering at the State University of New York at Buffalo. He is an associate professor of civil engineering. . . . **Dr. F. B. Sprow** was co-author of a paper in the A.I.Ch.E. Journal entitled



"Equilibrium Yield in a Liquid Phase Reactor with High Surface-to-Volume Ratio." Dr. Sprow is a member of the exploratory fuels and alkylation section of Esso Research and Engineering Company's Baytown, Texas R & D Division. He earned his B.S. and M.S. at M.I.T. in 1962 and 1963, respectively. In February, at the 58th meeting of the A.I.Ch.E. in Dallas, he presented "Surface Thermodynamics of Liquid Mixtures." . . . **P. L. Kelley**, who is at Lincoln Laboratory at M.I.T., authored an article in Physical Review Letters entitled "Self-Focusing of Optical Beams" and co-authored an article concerning physics of quantum electronics. . . . **J. D. Moore**, who co-authored "Parallel Data Transmission Between Business Machines," and has worked at Bell Laboratories since graduation, is engaged in work on the 403 data sets used with touchtone telephone sets for Digital Inquiry, Voice Answerback data systems (whatever all that means).

**Abe Aronow** wrote that he will be interning at Bellevue (N.Y.?) in medicine next year and will receive his M.D. from Harvard in June. . . . **George Krebs, VIII**, wrote that he was engaged to Miss Eleonore Goodlin and planned to be married in June. He is doing research towards his Ph.D. in physics at Rutgers and plans to finish by June, 1967. His wife-to-be is a graduate student at Rutgers in school psychology and plans to finish her Ph.D. research by about June, 1967 also. . . . **Charles Muntz** wrote that he and his wife Jill are the proud parents of a son, Gary Schaeffer, born in May, 1965. Charles has been working at the Instrumentation Lab at M.I.T. on Apollo Guidance and Navigation and he is presently acting head of the Guidance Computer Programming Group. He enjoys the work and co-authored a paper entitled "Organization of Computation and Control in the Apollo Guidance Computer," which is being presented at a conference in Norway this summer. He says that he's seen **B. T. Tucker** and that he is doing well at Honeywell Electronic Data Processing. . . . One year to our first reunion; not too early to begin thinking about it.—**Jerry Katell**, Secretary, Oceanic Properties, Inc., 401 Kamakee St., P.O. Box 2780, Honolulu, Hawaii 96803

'64

The news this month is again fairly sparse, with most of it from news clippings. Anyone who would like to send news over the summer should send it to my home address: 2227 Vollintine Ave., Memphis, Tenn. 38108. . . . **Giovanni Fazio**, who received his Ph.D. in high energy physics in '64, is working with another M.I.T. Ph.D. on a gamma ray detector that will be sent aloft in a balloon this spring. This is one of the first experimenters of its type in the new field of gamma ray astronomy. . . . **Thomas Hargadon** has been named administrative assistant to the mayor of Newton, Mass. He received his M.S. in political science in '64 after graduating from Harvard Law School. . . . **James Holton**, who received his Ph.D. in '64, is an assistant professor in the Department of Atmospheric Sciences, U. of Washington. . . . **Val Kruckonis** was in the hometown news for his work as researcher in the R&D part of Avco Corporation. He has concentrated on the development of ultra-fine boron, a high energy fuel. He received his Ph.D. in Chem E. . . . A letter from **Jack Prosek** reports that **Dan McCarthy** is working for National Video Corporation in color TV research in the Chicago area. . . . **Charles Salisbury** has been promoted to the position of associate engineer in the diagnostic division of the IBM plant at Kingston, N.Y. He has been working there since graduation. . . . I saw **Sam Taub** in downtown Boston in April. It was his spring vacation, and he was living it up with both a date on his arm and just having finished lunch at Joseph's. . . . The hero of this month is **Jerry Wesolowski**, who responded to a former plea for news. Jerry received his S.M. in Industrial Management and then took a six month training course in sales at Olin. Since April of 1965 he has been Caribbean supervisor for Squibb International, a subsidiary of Olin. He is living in Kingston, Jamaica, as a gay bachelor and enjoying complete managerial responsibility in the area for Squibb.—**Ron Gilman**, Secretary, 2227 Vollintine Ave., Memphis, Tenn. 38108

## M.I.T. Classes Have Reunions June 9-14

- 1906: Reunion Chairman, Edward B. Rowe, 11 Cushing Rd., Wellesley Hills, Mass.; Charter House Motor Hotel, Cambridge, Mass., June 12.
- 1911: Reunion Chairmen: Morris Oman-sky, 9 Babcock St., Brookline, Mass.; Oberlin S. Clark, 50 Leonard Rd., N. Weymouth, Mass.; Hotel Sheraton, Boston, Mass., June 11-12.
- 1915: Class Cocktail Party, M.I.T. Faculty Club, June 13, 4:00 P.M.
- 1916: Reunion Chairman, Thomas D'Arcy Brophy, 470 Park Ave., New York, N.Y. 10022; Oyster Harbors Club, Osterville, Mass., June 10-12.
- 1921: Reunion Chairman, Melvin R. Jenney, 9 Meadowview Rd., Melrose, Mass.; Griswold Hotel and Country Club, Groton, Conn., June 9-12.
- 1926: Reunion Chairman, Donald S. Cunningham, Hersey Sparling Meter Company, Box 31, Dedham, Mass.; Belmont Hotel, West Harwich, Mass., June 10-12.
- 1931: Reunion Chairman, Kenneth Gerneshausen, 240 Highland St., Weston, Mass.; Wianno Club, Osterville, Mass., June 10-12.
- 1936: Reunion Chairman, Frank R. Berman, 2 Eagle Hill Ct., Huntington, N.Y.; Curtis Hotel, Lenox, Mass.; June 11-12.
- 1941: Reunion Chairman, John H. Macleod, Jr., 376 Ocean Ave., Marblehead, Mass.; Baker House, M.I.T. Campus, June 9-14.
- 1946: Reunion Chairman, Theodore Henning, 32 Woodedge Rd., Manhasset, N.Y.; Provincetown Inn, Provincetown, Mass., June 10-12.
- 1951: Reunion Chairman, Fred W. Aldrich, Jr., 39 York St., Lexington, Mass.; Chatham Bars Inn, Chatham, Mass., June 11-12.
- 1956: Reunion Chairmen: William S. Grinker, 21 Woodward Rd., Framingham, Mass.; Martin H. Reiss, 20 Peterson Rd., Natick, Mass.; Wychmere Harbors Club, Harwichport, Mass., June 10-12.
- 1961: Reunion Chairman, Thomas Hastings, 18 Frost St., Cambridge, Mass.; Clauson's Inn and Country Club, North Falmouth, Mass., June 10-12.

### Changing Your Address?

If you are moving, please let us know five weeks before changing your address. Attach address label from your magazine to this coupon, giving us your new address below, and send it to Alumni Association, M.I.T., Room E19-439, Cambridge, Mass. 02139.

Name \_\_\_\_\_

New address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip code \_\_\_\_\_

### New Quarters for the M.I.T. Alumni Center of New York

Effective April 4, 1966, the M.I.T. Alumni Center of New York, formerly located in the United Engineering Center at 345 East 47th St., has moved to new quarters. The new location is on the fourth floor of the ultra-modern Alcoa Twin Tower Building situated at the North end of the United Nations Complex, and the new address is: The M.I.T. Alumni Center of New York, 866 United Nations Plaza, New York, N.Y. 10017; phone 752-5125. The Alcoa Twin Tower Building is located on First Avenue between 48th and 49th Streets. The entrance to reach the Alumni Center is on 48th Street between First Avenue and the East River.—Henry O. Pattison, Jr.

## Club News



### M.I.T. Oarsmen Will Participate in Syracuse Regatta

M.I.T. Alumni of upstate New York may zero in on Syracuse for the annual Syracuse Regatta of the Intercollegiate Rowing Association on Onondaga Lake on June 18. Oarsmen from 15 schools, including M.I.T., have been invited to row. The IRA, which brings together the top eight-men crews from coast to coast, is the championship event of collegiate rowing. Navy will be the defending champion in all three races. The Regatta format calls for three races in 1966, beginning at 3:00 p.m. Frosh crews will row two miles, while junior varsity and varsity boatloads will row three miles.

### Mass Transportation Discussed at Baltimore Winter Meeting

The M.I.T. Club of Baltimore held its winter dinner meeting on February 24 at the Cork and Bottle Restaurant. Guest speaker was Professor E. Farnsworth Bisbee from the M.I.T. Civil Engineering Department. Professor Bisbee presented a very interesting talk on radical new concepts of mass transportation, which he supplemented by slides from M.I.T.'s Project Transport. This presentation was quite stimulating to all attending, especially since everyone was to face the typical traffic jams of Baltimore the next day. Besides club members we had a few prominent guests in the audience; members of the Baltimore City Council, the Baltimore Planning Commission, and architects of this area.—Hans G. Morgenstern, Secretary.

### R. H. Winters, M.P., Speaks to Toronto Alumni

On February 18, 1966, the M.I.T. Club of Ontario held a joint meeting with the Harvard Business School Alumni Club of Ontario at the new Toronto Board of Trade Country Club. This most successful meeting was addressed by the Honourable R. H. Winters, M.P., Minister of Trade and Commerce in the federal government. Mr. Winters is also an M.I.T. alumnus, a Director of the M.I.T. Corporation, and a past President of the M.I.T. Alumni Association.

Mr. Winters spoke to us about the numerous administrative challenges inherent in the conduct of the nation's business and made several observations on the changes which have taken place in government operations in the eight years during which he was active in business affairs. He spoke also about the many opportunities facing Canada and Canadian business in operating effectively and expanding in international markets.—A. Kotliar, 494 Avenue Road, Toronto.

### Boston Alumni Meet for Luncheon

The Boston Club held eight luncheon meetings during the 1965-66 year. Club President Bruce Bredehoft, '56, obtained the color film of astronaut Edward White's walk in space for the first meeting and over 100 members came to see it. In succeeding meetings, the members heard Dean Frederick Fassett discuss student housing at M.I.T., Professor Max Millikan describe the problems of underdeveloped nations and Dean Jerome Wiesner report on his years as President Kennedy's Science Advisor. In later meetings the Club heard Professor Secor Browne describe plans for supersonic transportation and Professor Norman Rasmussen speak on the industrial uses of nuclear energy. By April the Club's membership had exceeded 300 alumni and was looking forward to hearing Dr. Albert Kelley, '56, Deputy Director of the NASA Research Center in Cambridge. The final meeting of the year was held in May and new officers were elected for the coming year.—Glenn P. Strehle, Secretary-Treasurer.

### Tampa Alumni Hear Report of Institute's Achievements

Those in attendance at the March 24 meeting of the Florida Westcoast Club heard Douglas F. G. Haven tell of the achievements and progress of the Institute in the last few years. Slides were shown of all the new buildings constructed to date. Slides were also shown indicating the trend and qualifications of selecting students to the Institute.

Florida participation has shown a healthy increase in the past few years and consequently an M.I.T. Alumni Scholarship Fund was established at this meeting. It is planned to have an annual "clinic" sponsored by this chapter and open to the general public for purposes of raising funds to build a strong scholarship fund. Also an all-Florida directory of Alumni will be printed in the coming year.

We plan a November organizational meeting at which time plans and committees will be selected to bring a top flite speaker and clinic panel for a full day meeting. We expect that attendance will be in excess of 200 Alumni and wives as evidenced by the success of last year's meeting with Dr. and Mrs. James Killian at which time 120 Alumni and wives participated in our first such meeting. We are considering the possibility of one joint "Ivy League Alumni" meeting whereby a Fiesta type meeting can result as a joint venture between M.I.T., Harvard, Yale, and Princeton.

### Mexico City Club Reports Successful Fiesta

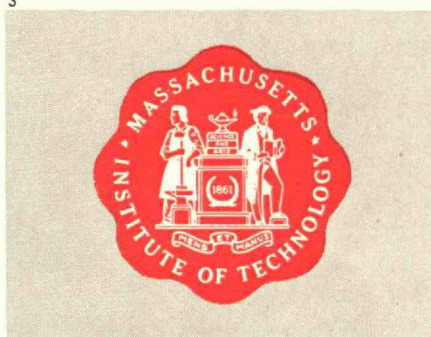
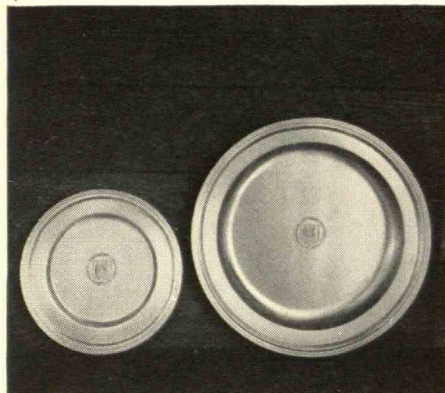
The M.I.T. Club of Mexico City celebrated their Eighteenth Annual Fiesta in Mexico, March 10-12. We had some 70 visitors from outside the Republic of Mexico, from Canada, the U.S.A. and Texas. Distinguished guests from M.I.T. and the Alumni Association included Dr. and Mrs. Stratton, '23; Don and Phyllis Severance, '38; Professor and Mrs. Max Millikan; Professor and Mrs. William Dennen, '42; Professor Kingery; Al Lunn, '17; Howard and Evelyn Richardson, '31; Cecil and Ida Green, '23.

Thursday morning we met at the Museo Nacional de Antropología e Historia where we were greeted by Dr. Eusebio Dávalos Hurtado, Director of the Instituto Nacional de Antropología e Historia and Dr. Ignacio Bernal, Director of the museum. After an orientation lecture we had an all-too-brief visit to various important exhibits guided by the charming and well-prepared museum guides. Later we met for cocktails and lunch at the University Club. Dr. Stratton and Don Severance brought greetings from M.I.T. and the Alumni Association. All of the ladies present received a silver key-ring with an Aztec "calendar" motif and the men received unique M.I.T. steins with a Mayan glyph.

Friday morning we took chartered buses to the ancient pyramids of Teotihuacan where we were guided by archeologists Dr. James Bennyhoff, U. of Rochester, Juan Vidarte and Mrs. Susanne Marquina of the INAH and our personal archeologist Evelyn Rattray of the U. de las Americas. We learned that the ancient city site was inhabited from 200 B.C., reached its height about 300 A.D.; when it supported a population of 200 to 500 thousand people, and disappeared into limbo about 600 A.D., possibly through civil war. At 2 p.m. we had a picnic lunch at Rancho La Ventilla, owned by Xavier Simon, '65. The ranch is itself an archeological site. We returned to the city and the Avalon Committee of the Mexican-North-American Cultural Institute invited us to a lecture by Dr. Millikan on "Science and Economic Development."

Saturday morning we were guests of the "Club de los Charros del Pedregal" at a traditional Mexican "charreada," organized by Paul Gerard, '35. Charros in Mexico are business and professional people who maintain the customs of horsemanship, rope-twirling and regional dancing. Saturday night we met at Rancho La Patera, the home of Patsy and Charlie Davis, '49, for a Noche Mexicana. Local members and their wives wore a variety of regional costumes to this garden party. Typical dishes and drinks were served from colorful booths which transformed the patio into a Mexican village. "Nish" Cornish, '23, presented Beaver awards to Bill and Ruth Dennen, '17 (Eagerissimo), and Al Lunn, '17 (Eager). Highlight of the evening was the breaking of a huge "pinata," a beaver dressed in the costume of Chiapas. We all enjoyed the "pachanga" and trust that our visitors did too.—Armando Santacruz, Secretary.





## I come back to Tech . . . and take Tech back with me

"I visit the Tech campus at commencement time and take time out for nostalgia. New buildings, new departments, new concepts, but still the insignia displayed proudly as a symbol of the continuity of M.I.T. I browse through the

Tech Coop (so different from the Technology Store I knew) and choose several insignia articles, as an expression of personal affection for a place which meant so much to me, so much to modern achievement."

1. Lustrous ceramic beer mug . . . . . \$ 4.95
- Ceramic coffee mug . . . . . \$ 3.50
- Other ceramic mugs with Sloan or M.I.T. seals in a variety of shapes and sizes . . . . . \$ .95 - \$5.95
- Square ceramic ashtray . . . . . \$ 1.50
2. Large pewter tray by International \$20.95
- Medium pewter tray by International \$11.95
3. Copper ice bucket with insulated lining . . . . . \$14.95
- Copper mug . . . . . \$ 5.95
- 10 oz. glass with red seal . . (dozen) \$ 5.95
4. Pewter pitcher by International . . . \$19.95

- Sheffield beer tankard . . . . . \$11.95
- Miniature Sheffield tankard . . . . . \$ 4.95
- Pewter ashtray/candy dish by International . . . . . \$ 7.50
- Medium pewter tray by International \$11.95
- And many more to choose from including Celutone Tech playing cards (\$2.95), heavy M.I.T. bookends with large brass seals (\$18.95), a soft grey plush beaver (\$3.85), sterling and gold beaver or insignia charms, drip-proof coasters (\$5.95), a great variety of ashtrays, and the handsome hardwood M.I.T. chair (\$32.50).



**THE TECH COOP**

IN THE M.I.T. STUDENT CENTER

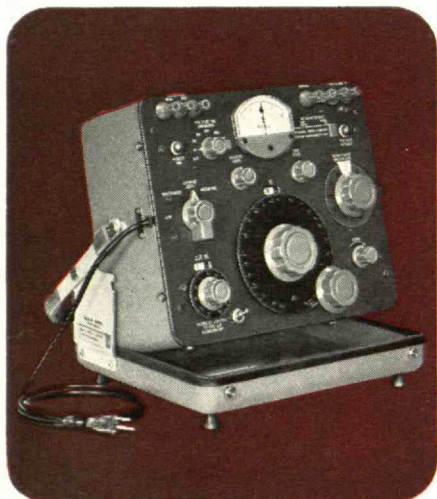
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Accuracy:  $\pm 1\%$  to  $10^{12} \Omega$ ,  $\pm 2\%$  to  $10^{13} \Omega$ ,  $\pm 10\%$  to  $10^{14} \Omega$ ,  $\pm$  one scale division to  $10^{15} \Omega$ .

Built-in, line-operated generator and electrometer-tube detector: completely self-contained in handy Flip-Tilt carrying-case/cabinet.

Seven fixed test voltages: from 10 to 1000 V; other intermediate test voltages can be easily set with external resistors.

Deviation ( $\Delta R$ ) dial: calibrated in % with range of  $\pm 5\%$  and accuracy to  $\pm 0.1\%$ .

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Guard terminal provided for shielded measurements.



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**Electrometer**  
**and DC Amplifier ... \$495**  
in U.S.A.

Ranges:

Resistance —  $3 \times 10^3 \Omega$  to  $1 \times 10^{13} \Omega$ , full scale.

Voltage —  $\pm 30$  mV to  $\pm 10$  V, full scale.

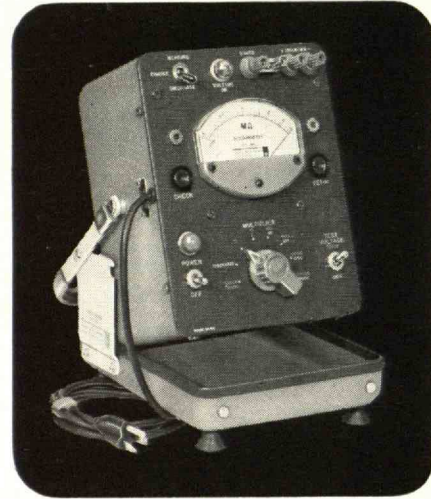
Current —  $\pm 1$  mA, full scale, to  $\pm 3 \times 10^{-13}$  A, full scale.

Test voltages: 9.1 V, internal; any voltage up to 600 V, external.

Input resistance: up to  $10^{14} \Omega$ .

Basic accuracy:  $\pm 3\%$  to  $\pm 8\%$ , depending on magnitude of measured resistance.

Complete guard, ground, and shielding provisions; component shield also available as accessory.



**Type 1862-C**  
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Two standard test voltages: 100 and 500 volts; meet EIA and machinery standards.

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